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The Death Penalty
WHAT VALUE?

WHY EVIDENCE BASED MEDICINE?

FOOD IRRADIATION- FACTS AND FICTION

SKEPTICISM IN MUSIC

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Skepticism: More Vital Than Ever

In this issue we continue our recent focus on issues not usually found in Skeptical publications. In particular, we look at topics that frequently rouse strong emotions, for and against, such as the death penalty, euthanasia and food irradiation.

It is a sad commentary on the modern world that many complex issues attract, not so much reasoned debate as 'positions'; positions which are often located at the extremes and are rarely well formulated. In situations like this, it is easy to blame the media or politicians for dumbing down the debate but we, the public, must share the blame. We generally have come to prefer our news to appear in predigested packages or sound bites, resulting in serious discussion of issues all too often degenerating into exchanges of slogans, as facile as they are brief. Nor is this confined to any one side of any debate — all sides are equally guilty on occasion.

Take the global warming/nuclear energy debates, discussed in our last issue, as good examples. The issues are complex and the solutions are not simple ones, yet much of the public debate relies solely on scare tactics or impugning the motives of opponents. Again, too often both sides are culpable of replacing reason with rhetoric. Such harangues are not helpful in convincing a lay audience of the correctness of the arguments, or at least those parts of the audience who are moderately scientifically literate — and skeptical.

This sort of disputation is instrumental in encouraging conspiracy

thinking, and such theories are flourishing in the dumbed down intellectual climate that presently prevails. In a recent survey conducted by *Time* magazine in the USA, fully one third of respondents were convinced that the events of September 11, 2001 were somehow engineered by the US government, or other agencies unrelated to the real perpetrators. Proponents of such conspiracies are vociferous in defending 'the facts', as they see them. They are totally immune to counterarguments that seek to rely on the hard evidence and reasoned conclusions. Logic has no effect on opinions that are held as though they are holy writ. Yet these people call themselves skeptics, and to some extent that is a correct designation. What they are not, however, is what those of us who belong to formal Skeptical movements strive to be — *informed Skeptics*.

It is impossible to stress just how important education is to the task of inducing informed skepticism into our society. Well-(though not necessarily highly-) educated people are better furnished with the skills required to cut through fallacious propositions. This is one reason why Australian Skeptics sponsors a variety of awards aimed at improving critical thinking skills in schools. Our hope is that they will encourage people to question bald assertions, about the nature of the universe and our place in it, by fundamentalist religious literalists masquerading as scientists, or the equally specious new age propositions peddled by advocates of alternative medicine and future divination systems.

However our task is not made easier by the fatuous notions pervading far too many of our education systems, luxuriating under the rubric of 'postmodernist theory'. Ostensibly aimed at fostering critical thinking, it does no such thing, being strong on the critical and weak on the thinking. By holding, *inter alia*, that truth and facts are relative concepts, it fosters the belief that all opinions are equally worthy. This is a proposition no informed Skeptic could accept for a moment.

In many ways, the vacuous dogma of postmodernism is equally as dangerous to the intellectual health of a modern society as are the quasi-religious notions behind intelligent design. In fact postmodernism, in its lack of discrimination between fact and opinion, could be seen as supporting the claims made on behalf of ID. It certainly does nothing to foster informed Skepticism.

Dogma is the antithesis of Skepticism, and the aim of *the Skeptic* will always be to present well-argued propositions, backed by verifiable evidence, and to encourage reasoned debate. If we have to have a slogan, let it be:

Everyone has the right to their own opinions; they have no equivalent right to be taken seriously.

Barry Williams

Around the Traps

Apology

We must make a grovelling apology to two of our subscribers for an error in attribution we made in the last issue (26:2). On page 59, an item headed "Limits on the State, not Demands from It", was attributed to Michael Marsh, of Albany Creek, QLD. This item was, in fact, written by Dr Peter Arnold, of Edgecliff, NSW. The error was entirely ours and we apologise sincerely to both gentlemen for any embarrassment it might have caused either of the. As a penance, we will refrain from making disparaging remarks about South African cricket in the future.

Pluto problems

The recent decision by International Astronomical Union, meeting in Austria, deciding to change the rules by which planets are so described, has caused a deal of excitement in certain circles. Most concern was caused by Pluto being relegated to the second division of 'dwarf' planethood, which seemed to incense even some folk who should know better. For example, a number of petitions have been floating around the place demanding that it be reinstated. Do they imagine that

Pluto's feelings might be hurt? Or it simply resistance to change?

The fact is that, since it was discovered by Clyde Tombaugh in the 1930s, Pluto has always been something of an 'odd-man-out' among the Sun's orbiting companions. Neither rocky like the Mercury, Venus, Earth and Mars, nor a gas giant like Jupiter, Saturn, Uranus and Neptune, Pluto is a small, icy object with a peculiarly eccentric orbit. This wasn't a real problem while it was the only such object known, but since then astronomers have discovered other, similar bodies, and the alternative of just keeping on adding new planets was not one those tidy-minded folk chose to contemplate. Apart from anything else, it made the construction, and memorising, of suitable mnemonics rather difficult. (A confession — Bunyip has always found it easier to remember the order of the planets than any mnemonic.)

NASA concerns

Among the more bizarre manifestations of this weirdness was included in a story we read from an overseas newspaper. It started well, with a sober report of the deliberations and decision of the IAU, but then came this sentence:

It was unclear how Pluto's demotion might affect the mission of NASA's New Horizons spacecraft, which earlier this year began a 9 1/2-year journey to the oddball object to unearth more of its secrets.

It might be unclear to whomever wrote that, but the question should pose no problems to anyone capable of cleaning their own teeth. Would this scribe expect NASA to collectively exclaim:

Oh, curse it, we've spent millions on this probe and now it's only going to a dwarf planet. The best thing to do is blow it up.?

From gorbimey to ridiculous

And then, of course, there are other journalists who seemed to think their Pluto stories would be incomplete without a comment from astrologers. Not, as one might expect, as some sort of light relief, but as serious inquiries along the lines of:

How will the removal of Pluto, or the addition of new dwarf planets, affect your work?

The consensus among these astrologers seems to be that it won't have much effect at all. Which is true of course, as nothing about any planet

(dwarf or otherwise) has ever borne any relationship to the way they construct their weird platitudes. When was the last time any new astronomical body was discovered, based on advice from an astrologer?

From Pluto to plutonium

With all the debate going on about nuclear energy, it's nice to know that someone is seriously thinking of doing something about and the problem of waste disposal.

Madonna, the American singer (not to be confused with the subject of all those religious paintings), a recent convert to the latest Hollywood fringe belief, Kabbala (not to be confused with the ancient Jewish mystical biblical interpretation method), plans to deactivate the waste by the application of 'Kabbalah fluid'. Bunyip is not sure how she plans to create or administer this stuff, but her heart seems to be in the right place. Pity about the brain, though.

Defective detectives

Curious, and rather macabre, goings on in the tragic, decade-old, JonBenet Ramsey murder case in Colorado, USA. When a man, John Mark Karr, then living in Thailand, confessed to killing the six-year-old girl, supporters of the bizarre notion that psychics can provide police with useful information, trotted out claims made by the late 'psychic detective' Dorothy Allison. Allegedly, Allison had foreseen a killer's involvement and had produced a drawing of his likeness.

With Karr's confession became known, these True Believers (including a number of journalists) produced the drawing and pointed out just how much it looked like Karr. Other, more skeptical, people also noticed similarities between the drawing and the man who had confessed — the same number of eyes and ears, for instance, though few other matching points.

When Karr's 'confession' was shown

to bear little resemblance to the facts of the case, the TBs fell strangely silent. However, if another suspect turns up, one would not need to be a cynic to predict that the same believers (and the same journalists) will trot out the same facile claims.

You can view CSICOP investigator, Joe Nickell's cogent treatment of the subject at:

www.csicop.org/specialarticles/sham.html

Prophets of the press

And while we are giving journalists a serve, when exactly was it that so many of them gave up news-gathering in favour of pontificating? (After all, how would they like it if the Pope suddenly took up charging into their newsrooms shouting "Hold the front page"?) It wouldn't be quite so bad if their *ex cathedra* statements indicated that they actually knew something about the topic, but it is rarely the case, as the above examples demonstrate.

Trouble at BA

Meanwhile, the annual meeting of the British Association for the Advancement of Science (BA), held this year at the Uni of East Anglia in Norwich, has stirred up controversy among many leading scientists, by including a series of lectures on paranormal topics.

Those participating included Dr Rupert Sheldrake, long the champion of an hypothesis he calls 'morphic resonance', which proposes some sort of interconnectedness of all things. This has led him to propose experiments that will show, *inter alia*, that dogs know when their human is about to arrive home, and that staring at someone's back causes them to feel uncomfortable (tests that *the Skeptic* conducted in an informal way many years ago, with no noticeable effect on dogs or strangers). His latest proposal purports to demonstrate that people can

be alerted subconsciously about a telephone call before it is made. He claims results significantly above chance, though others have criticised the methodology he uses.

Also involved was Dr Peter Fenwick, a retired neuropsychiatrist, who investigates near-death experiences, with the hope of proving the continuation of consciousness after death.

The controversy reminds us of a similar case in the 1980s, when the American Association for the Advancement of Science (AAAS), under the presidency of Margaret Mead, invited parapsychologists to become part of the organisation, to the disgust of many scientific members.

For the record

Few of us would have missed the Enough Rope episode in which Andrew Denton interviewed Michael Willessee about his conversion from skeptical journalist to true believer in all manner of implausible 'miracles' he claims to have witnessed.

Denton raised the point that Willessee had once received an award from James Randi for his former work, to which Willessee responded that Randi was a fraud. Just to set the record straight, James Randi (who is certainly not a fraud) never awarded Willessee anything. It is true that Australian Skeptics gave the program that Willessee fronted a Skeptical Journalism award for some excellent work in the 1980s, and CSICOP also awarded Willessee for his work. Neither James Randi, nor the James Randi Educational Foundation did.

Mr Willessee is entitled to believe anything he wishes, but he is not entitled to distort history.

Bunyip

Why Evidence Based Medicine?

The case for science over delusion

Following my talk at the Skeptics Conference in 2004 I was accused of “throwing the baby out with the bathwater” and later at the 2005 conference of being doctrinaire. Having been involved in health administration I am familiar with disagreement but what perplexed me was the belief that applying evidence to health decisions was somehow discarding something (inappropriately) from health care — this required some thought.

Neither of my critics were involved in health care, which made it difficult for me to conceptualise medicine from their viewpoint, so I was forced to engage in a dissection of the role of medicine and the perception of the role of medicine within the community at large, and hence medical epistemology.

The craft origins of medicine

Medicine was traditionally taught as craft; books were not available, learning was by rote and many pre-Gutenberg texts that have survived were written in verse to aid memorisation. The craft was both intellectual and physical, practitioners had to know how to respond to an apparent injury using *analysis — plan — intervention — review*, in a repeated cycle, they had to know how to examine — what did dislocated joints feel like before and after reduction? Even when the great Italian Universities began teaching anatomy from the

corpse, rather than teaching a belief in the description of the Barbary ape by Galen, learning was by memorising a limited set of demonstrated structures, and observed human behaviours. The Renaissance was a questioning of all dictated beliefs; great thinkers such as Spallanzini established the principles of hypothesis testing derived from the Greek syllogistic deductive logic, while Paracelsus and others developed descriptive epidemiology, which grouped similar patterns of illness together. Applying these basic principles were Harvey and others who demonstrated the dynamism of human physiology *in vivo*.

Surgery developed differently — it remained as a craft, learned as an apprentice (often on the battlefield) — it fell to barbers in many countries, as the possessors of sharp instruments, to engage in this activity, often without any detailed knowledge of anatomy.

Revolutionary reform

In the early 19th Century, Medicine and Surgery were united by the reforms of the French Revolution, a move emulated in the rest of the world. Books were now affordable and medical knowledge escaped the craft system to be replaced with formal learning in Universities, with a body of knowledge perpetuated in print. Journals began updating that knowledge — they were a combina-



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tion of case reports, edicts from experts and advertising *materia medica* as the blossoming free enterprise economies began exploiting new markets. The investment in knowledge required protection to ensure that, in the *laissez faire* economic world, people would not simply pretend to be qualified, and so registration of practitioners was required. This was not the first time — in the 10th Century in various Islamic city states, registration of formally trained practitioners had been required, and charlatans were prosecuted.

New technology has driven the development of medicine. The microscope was probably the greatest single invention, for it spawned histology, microbiology, pathology, haematology etc, and enabled the identification of specific causes for infectious disease. No more would the miasma from Italian swamps be blamed for malaria, but the specific organism *plasmodium* and its vector were identified — stop the mosquitoes breeding and the disease disappears. Hypothesis testing and proof on a grand scale.

Semmelweis and Lister observed the association of practitioner behaviour with infection though the organisms were invisible to them, and undertook to change the behaviour with success (though Semmelweis was a bit too doctrinaire for his colleagues, who failed to change immediately).

Pharmacology evolved from case reports of experiments with unstandardised herbal preparation, through standardisation (Withering), to formal trials of extracts, to the present molecular design approach. Surgery also evolved — particularly with the development of anaesthesia that reduced patient stress, and the haste with which the surgeon applied his skills.

The entire past 500 years of the development of medicine has been characterised by:

- Hypothesis testing;
- Dissemination of ideas and results for public scrutiny;

- Repetition of experiments to test published method and results;
- Revision of theory according to proven new knowledge;
- Discarding dangerous, ineffective or adverse interventions.

Commercialisation and AltMed

The commercialisation of both medicine and its supporting industries has driven great technological change — but the profit motive has also led to the dissemination of useless and dangerous treatments, as the commercial imperative has driven the subversion of this process and progression of knowledge. It is doubtful that some of our very useful pharmacological agents would exist without this process, for non-commercial research has been starved by the economic drags.

The marketing of new processes and interventions is now directed to generating enough profit within 2-3 years to recoup investment before the efficacy, indications and true role can be established by epidemiological observation or unbiased research.

Allegedly in competition are the AltMed industries. These are a mixture of traditional (herbalism, acupuncture, shaman rituals) and recent inventions (chiropractic, osteopathy, reiki, chromotherapy, homeopathy, aromatherapy, therapeutic touch etc). Herbalism needs to be regarded differently from the others, as research has demonstrated therapeutic benefit for some herbal preparations, and many modern effective pharmaceuticals are purified from herbal sources. There are two elements that mar herbalism; that the efficacy is imbued with magical belief in the mystic combination of herbs, and the variability of the active ingredients according to growing site, season, method of preparation. A single herb may contain several thousand active chemicals some of which may be known, and their acute and long term effects studied — taking herbal preparations thus becomes a form of pharmacological Russian Roulette.

Other parts of the AltMed industrial complex have not been well studied. In the USA some elements have sought, and obtained, legitimacy despite repeated failure to demonstrate efficacy. In the case of neck manipulation, inducing strokes through dislodging arteriosclerotic plaques or causing Carotid or Vertebral artery dissection is treated as a simple occasional adverse effect of treatment (risk is approx 1:400000 treatments per annum) — but, as the intervention has not been demonstrated to have therapeutic worth, is the risk appropriate? Of course some of the AltMed industries not only produce direct adverse effects, but they misinform the populace on what are effective and ineffective interventions. We have the rare occasions where chiropractors are prosecuted for manslaughter when they advise parents not to have life saving surgery in their child (Fenn 2000 *et seq*), or apply dangerous “treatments” such as burying children in fermenting manure to induce hyperthermia — but they also advise parents not to have children immunised, or worse, con them into believing that some crackpot medicine *is* immunisation. The credulous parents who injure their children in this way react like most victims of a fraud — they hush it up and allow the persistence of the crime.

Market competition, poor education and training, have led many medical practitioners to not only believe in the efficacy of anti-science folk remedies, but also that they generate huge incomes by promoting them.

The law

A principle has been established in commercial transactions that goods sold must be of merchandisable quality. This *post hoc* judgement does not attempt to analyse the beliefs of the purchaser about the product. However, another test is that of false advertising — the published claim that a product or a service provides something it cannot, or does not. If this advertising is in the form of advertorials (like *Second Opinion*,

Why EBM?

fortunately no longer on the ABC) regulation becomes difficult. When it comes to service industries there appears to be little willingness or capacity to prosecute unless there is both a severe adverse outcome and considerable publicity. Convincing someone that immunisation is bad, even when this misinformation leads to death or disability of a child, is not considered a criminal act, despite the well proven falsehood of the claim. Our government spends many millions of dollars attempting to counter these well publicised falsehoods through publicity and financial incentives.

Health interventions must then be viewed as a dichotomy of philosophy; one which approaches the health from a scientific aspect, examines the consistency with existing knowledge and tests new and old procedures constantly for efficacy, discarding the useless and dangerous; the other from an *a priori* belief system, operating like a cult, reassured by an absence of analysis, dismissive of criticism as mere market jealousy and firmly geared toward practitioner profitability rather than population health outcome. Is this the baby I was accused of throwing out?

If there is an absence of client orientated ethics in the provider, how can the consumer judge what decision to make? The capacity of the law is limited in these circumstances — we are now facing draconian laws which will “disappear” people believed by an anonymous informer to be a terrorist, but corporations and individuals who cause more death through ignorant acts of omission or informed acts of commission are not only allowed to flourish, but are actively promoted. Suppose a company marketed an “insect repeller” proven by experiment to be useless, claiming to have properties which were inconsistent with existing knowledge of physics and animal behaviour; many people would buy this product, some would expect it to repel disease carrying mosquitoes, some would suffer dengue, malaria, or filariasis as a consequence — some would die.

Given this scenario it would be expected that the principles applied to normal commercial transactions would apply. Is the product of merchandisable quality — yes (it may be useless but an LED comes on when it is plugged in). Is the product falsely advertised — yes because it is sold as an insect repeller which it is not, and cannot be within the known laws of physics and simple empirical proof.

What then of a person who does not advertise, who relies upon word of mouth, a clever con man with absolutely no sense of empathy or social responsibility, who will happily trick the person dying from cancer and their relations out of tens of thousands of dollars, leaving the patient in agony for months and probably shortening their life through the immunodepression that the stress of pain causes. Such a person is effectively untouchable, except by publishing accounts of their callous fraud.

One of the principles derived from the history of medicine is *primum non nocere* (first do no harm). Such an aphorism is fine when there are no effective interventions — the placebo offered should not make the patient worse. This principle is, however, useless when there are effective treatments; but all effective treatments carry a risk, both the risk of the intervention itself and the risk of choosing one particular intervention over another. How does the practitioner, and the patient, choose the best treatment? (We will for the moment ignore the question of accuracy in diagnosis, and the risk of practitioner mendacity for personal gain).

Do they rely upon paid advertising, do they rely upon the professed beliefs of the various AltMed cults, do they rely on the rote learning of the practitioner from 20 years previously. If we lived in a world without ready access to accurate information, then one of these would legitimately apply, but the information is there — it is just hard to find, and even harder to distinguish scientifically

accurate reports from biased self interested advertorials.

Evidence based practice

This is where evidence based practice has its role. It is not, as is claimed by some, a cookbook of guidelines to be slavishly followed lest some authority demand justification. It is primarily the establishment of a sense of doubt in the mind of the practitioner, and hopefully their patient. Often there is insufficient time to engage in this process and this is why we train to follow protocols in emergencies — there will be times when the protocol followed will be inappropriate, but overall having a standardised process to follow produces a better average outcome. Evidence based practice is not about emergencies, it is for those important circumstances where there is time to ask “Is this diagnosis accurate”, and “what is the best treatment for this problem”, and providing the analytical and research skills to seek and interpret the information for the patient. It is the patients’ irrefutable right to choose what treatment they wish, and the practitioners role to provide an estimate of the risks of each alternative treatment, or no treatment at all.

Opposing this of course is the recall method of managing a health problem. The decision is based on what the practitioner can recall about the problem. This recall will be a mixture of rote learning in medical school, exposure to the treatments of the same problem implemented by other practitioners, marketing by the pharmaceutical, pathology and imaging industries, popular press advertising, personal beliefs, overlaid with the emotional effects of past experiences (usually bad). Of course as this is all fronted by the practitioners persona — any questioning of the content by the patient is a challenge to the capacity and correctness of the practitioner. If the practitioner rarely encounters the problem, the quality of information used will be increasingly dubious. This judgement process is not

just about what intervention to use, but when it should be introduced.

Outcomes

In recommending and providing an intervention the practitioner must make a judgement on outcome. There are two outcomes to consider, first, has the intervention worked? Second, is the patient satisfied? These are two very different but overlapping domains. Complicating the assessment is the practitioner whose values impinge on both the outcomes assessed. If the bias is toward the intervention as a commodity, then client satisfaction will be paramount; but if the outcome is to actually solving the health problem, then an objective means of evaluation is required.

To simplify; a young man consults his GP with a sore throat, the GP assess the signs and symptoms and determines the most likely cause is a streptococcal sore throat, current evidence suggests that oral penicillin is the most appropriate treatment — it will shorten the duration of symptoms by 36 hours, and reduce the likelihood of a streptococcal immune disease (glomerulonephritis, erythema nodosum, rheumatic fever etc) — the bacterial tonsillitis is cured, the symptoms disappear and there are no adverse outcome — practitioner and client assess there is a good outcome. But let us surmise that there was a membranous phar-

ngitis, an enlarged spleen and hepatic tenderness — infectious mononucleosis is therefore more likely. The practitioner judges that penicillin is not of benefit, and does not prescribe, the illness persists, the client is dissatisfied due to the absence of a cure, but the risk of penicillin induced immune disease is avoided — the practitioner is happy with the outcome, but not the client. A third possibility is that the GP determines that the cause is infectious mononucleosis, and is aware that nothing will reduce the severity of the illness, but decides to prescribe a placebo to make the patient feel better. Following the principle of *primum non nocere*, he prescribes Echinacea and delivers an appropriate spiel telling the patient that this will markedly reduce his fatigue, and if he stays off alcohol, and maintains a good diet he will be completely cured in 4-6 weeks. That it is exactly the same period for recovery with no placebo is irrelevant, because the patient “knows” the doctor is trying to help. Approximately 40% of patients will report feeling substantially better with the intervention which is known to be useless, and carries a minimal risk.

Is this ethical? For the placebo to be effective the GP must delude her client — she must knowingly falsify the efficacy of the treatment in order to satisfy the commercial aspects of health intervention and produce a

happy client. I would argue that it breaches one of the principles of medical ethics — patient autonomy, though it does satisfy beneficence.

If medicine was not science based there would be no problem, but as I have indicated above, all of the advancement in medicine has come from application of scientific method and principle. If the baby is this persistence of anti-science in the application of health interventions — *then out the baby must go* — otherwise there is nothing to distinguish medical care from the purveyors of irrational and untruthful cult based health remedies. There is no role for looking earnestly into a patients eye and reassuring them that the treatment will be efficacious because I, or someone else, believes it will benefit them. The best decision on treatment will be based on prior results, and if the treatment is experimental, on the scientific likelihood of benefit, not on an idiosyncratic interpretation of hearsay, advertising, remote memory recall or the latest deluded ravings of a publicity seeking quack.

Is this being doctrinaire? Am I being rigid in applying principles? Am I rejecting belief and claims because they are not supported by proof? Am I a Skeptic ?



Convention Melbourne November 18-19

The Death Penalty: What Value to Humankind?

Some sane thoughts on a contentious issue



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There remain sharp-minded, principled people who hold a largely non-ideological view that a good and moral society benefits from the judicial application of the death penalty, a view that should be amenable to sensible discourse. Ideological belief, on the other hand, is more difficult to address since, by its very nature, it tends to describe things not easily verifiable, and thus not easily refuted (or supported). Nor is consistency of opinion easily arrived at — divine guidance has been claimed by both proponents of the death penalty and those who abhor state-sanctioned execution. This is not a criticism of beliefs *per se*, since we all suffer them, but the influence of religious belief on decision-making is not the subject here, and further reference to religion will only be made in passing.

Abolitionists will have beliefs about the death penalty that are primarily visceral, and resistant to counter-argument. Nevertheless, when rationale argument is followed, and reference to belief minimized, many of us have reached the conclusion that the death penalty is an anachronism which can no longer be justified, and that application of it is unhealthy for the society at large — we are sceptical that the death penalty serves society well. Some of the arguments are as follows.

Mistakes

The problem with mistakes, of course, is that many who have been despatched after judicial process have been innocent. How is this problem to be overcome? A friend once raised the possibility of determining probability of guilt, since he shared a concern with the high numbers of those not guilty of the crime wrongly executed by Southern States of the USA; known error rates have apparently reached as high as one in five. The suggestion was to execute at the $p < 0.05$ certainty level, a level commonly accepted to denote acceptable proof in scientific determinations. In simple terms it would mean that the number of innocents killed by the State would rarely be more than 5 per 100.

However, a first hurdle is that guilt is not generally the most quantitative of phenomena. A second problem is that, unlike scientific findings which by definition must be repeatable and verifiable (they are otherwise non-scientific), there is no “repeat” for the deceased if he or she is later proved innocent. Would moving to $p < 0.005$ make state-sanctioned killing of any innocent person acceptable? There are very few who would sanguinely accept the electrocution of an innocent person, satisfied with the knowledge that the State has applied the correct level of probability in reach-

ing its decision. Applying any probability level is a big call.

An eye for an eye: It's only just

While the issue is said to be about Justice, when pushed, proponents of the death penalty often admit to vengeance being the core issue. Consider the televised images of families in America crying out their right to watch the execution of the person who has caused them loss and pain. But vengeance, however understandable at the individual level, remains an emotional response, while the development of society is all to do with the opposite, namely the substitution of rules applied by the State for individual responses to wrongs.

At the level of the child the “eye for an eye” attitude sometime arises, and sometimes at the encouragement of parents — “if he punches you in the nose again, you punch him back in the nose”. Note that parents will rarely say “kick him in the groin and bang his head with a brick when he falls over”. An eye for an eye. It wouldn't do to have it all get out of hand. In the adult world it can also be applied, with tacit approval, particularly in more remote regions where people tend to manage their affairs on their own: “He shot my cat, so I shot his dog”; a real life example from rural Australia, expletives omitted.

However, no one can argue against the fact that being part of a “civil” society relies on the presumption that application of law and punishment remains primarily the responsibility of the State and not the individual, and evermore so with the seriousness of the offence. Personally, I think I might be capable of killing someone who had violated or murdered members of my family, although I don't know for certain, since fortunately (as regards to most members of the family) it has never happened. Nevertheless, our laws and police would properly act to prevent me from doing so. The distinction is crucial.

It is true that aspects of the Old

Testament “eye for an eye” ethos that do not involve physical damage to a person still hold, to some extent. Reparation of stolen money is an example. Psychological pain hopefully felt by perpetrators who are made to face their victims, is another. Nevertheless, if an eye is literally lost in an assault, there is no suggestion that the aggrieved has the right to subsequently remove the eye of the assailant, at least not in our society, no matter how vengeful the aggrieved might feel. Conundrums would arise if we did so: Is the eye to be removed with or without anaesthetic, by the aggrieved or by a qualified doctor who is able to ignore the Hippocratic oath? Is the punishment just when the assailant is visually impaired, or has only one functioning eye as is. Would removal of the remaining eye be adjudged too severe? What if later evidence proved the accuser wrong? We can't yet transplant entire, functioning, eye balls. Sorry mate, here's your stick, the doors are open. Perhaps the “eye for an eye” philosophy was always more abstract than literal, indicating that punishment should reflect the gravity of the crime and very few eyes were literally removed as punishment — the tone, nevertheless, is illustrated by the ancient practice of literally severing hands from the arms of thieves, a practice that continues to this day in some parts of the world.

In summary, justifying the death penalty on the basis that the vengeful wronged have the right to expect “an eye for an eye” is incompatible with membership of modern society — this is not how we operate, and for good reason. And of course, the death penalty issue suffers an associated inconsistency so obvious I have heard children state it: They kill, we consider this wrong, and will now kill in retaliation — there really is a problem with the argument.

Deterrence makes us safer

This has been argued, but is it true? The answer, when executing vs non-

executing States of the USA are compared, is no. In fact, if the (albeit simplistic) link is made between cause and effect, the evidence indicates that violent crime is higher in those States that apply the death penalty. As a counter example, the rate of murder in abolitionist Canada, is far lower. Perhaps the judicial noose makes for a safer Singaporean society, but is it difficult to determine this with certainty. The general consensus amongst those who study these phenomena is that executing criminals as a deterrent appears not to work very well. There is no doubt that entire communities can be made servile when faced with summary execution applied by despotic rule (although eventually rebellion occurs, often leading to a deal more killing). However, the threat of the death penalty seems to have little effect on individual offenders who are violent, or even if they are not, the current crop of young heroin traffickers imprisoned in Indonesia being a case in point. If members of those societies that revert to the death penalty are not any safer, and they do not suffer lower rates of murder, violence or drug offences, then what is the point of burdening the society with more killings?

“They deserve to die”

This might be the usual emotional conclusion, but state-sanctioned killing endangers the society, because it further brutalizes it, as argued subsequently. And apart from the society at large, how can the act of killing do anything but adversely affect the individual executioners? It cannot be good for humans to earn their living by organizing and effecting the death of captured humans. Why else the blanks in a firing squad? It is hardly surprising that the Singaporeans have found it difficult to replace their aging hangman (as reported in *The Australian* prior to the last execution of a young Australian). There are also pragmatic reasons for not executing criminals: those who try to establish reasons

Death penalty

for unacceptable behaviour have lost their prime witness, and the guilty may retain crucial information, as illustrated by cases where prisoners sentenced to life imprisonment have later revealed further killings and burial sites, giving some comfort to those suffering unexplained disappearances of family members.

There is an argument that in isolated, non-urban or nomadic communities, it was no doubt necessary to sometimes remove violent offenders and psychopaths who placed members of the entire group at risk. These perpetrators could be killed or forced into exile. However, and whatever the limitations of becoming urbanized, this need is now almost entirely avoidable.

Which societies most favour the death penalty?

It is a simple matter to compare societies where the death penalty is used not at all, to those which rarely use it, to those which use it quite commonly, to those which use it at will. At which end of this scale do we find the most brutal governments? Saddam Hussein presided over a blood-thirsty, retributive regime, and “official” rates of execution were sickeningly high. In contrast, no one of right mind could say that the wide array of European governments, across which the death penalty is abolished, express anything like these levels of brutality. The link is extremely obvious, and arguments that the link is not necessarily absolute (taking the Singapore example again), is insufficient to deny the trend: the more brutal the society the more frequent the application of state-sanctioned execution.

Run the gamut of history, and another progression is patently obvious. Let us again consider Europe. Four hundred years ago: execution was often slow and exceedingly cruel. Two hundred years ago: Europeans employed the noose or guillotine to kill quickly, but still for a wide range of offences including non-violent crimes like the counter-

feiting of coins. In the 1915 Great War British soldiers were executed, sometimes immediately and sometimes after judicial process, for not moving forward on command. But from here and at quick pace the use of torture, and both public and covert execution, lost ground, and the societies of the European Union are now, by any measure, amongst the safest, and sanest, on earth. None have the death penalty, nor can nations wishing to join the EU employ it. In the most simple terms, the more civilized the State, the less violent the society, and this civil nature includes removal of state-sanctioned execution. The list of abolitionist nations is growing with India reportedly scheduled to join in the near future.

These two important arguments for abolition, predicated on the assumption that brutality is undesirable, need reiteration: The more brutal the society the more often the death penalty is enforced, and for a wider range of offences. The corollary is true to the extent that the least brutal societies tend to abandon the death penalty altogether. The evidence is overwhelming. Secondly, the historical progression is plain for all to see. If we start at the Middle Ages, we find frequent and public torture and execution. Over the last century in Europe the death penalty became limited to settle a small range of very serious offences, and now in modern times, it has been abolished. Proponents who favour the death penalty and choose to defend their case surely need to mount counter argument.

The cost of “keeping the scum”

This raises a profound ethical issue. How can we in Australia justify spending tens of thousands of dollars each year, for half a century or more in some cases, treating a heinous criminal to a standard of food and shelter which is better than some of our poorest have access to, and is far better than millions of the worldly poor can hope for? However inadequate it sounds, it can be argued that state-sanctioned killing

lessens all of humankind, including those who have been dealt a poor set of cards. And we, a rich society immersed in a consumer frenzy, need not concern ourselves too much about the cost of maintaining a reasonably humane penal system — it is not driving us broke.

Moreover, and although not widely appreciated, the money spent in the execution process in the USA outweighs the price of life imprisonment by millions of dollars per inmate, a situation which would probably be mirrored if the death penalty was to be reintroduced to any other Western nation where citizens have extensive access to due process. It surely cannot hold in China, where a single bullet is used in quickly applied justice (including for non-violent crimes such as corruption) with the price of the bullet recouped from the family of the executed prisoner. The Americans would no doubt argue that their system, which incorporates re-distribution of wealth to members of the legal profession while ensuring that inmates spend years on death row, is the more civilized.

We in Australia require better leadership on the issue of the death penalty. A racist core, not picked up by media, pervades the responses of both our current Prime Minister (a committed Christian), and the previous Opposition Leader (reportedly an atheist) to the Bali bombings. Both gave tacit approval to the death sentence meted out to the bombers. Presumably this otherwise uncivil act is acceptable if perpetrated by southeast Asians and there is always the hope that perceptions of tough leadership will translate into votes at home. Where was the unambiguous statement that “despite the appalling, inhuman deeds of these persons who we hope are never released from confinement, we unequivocally oppose the death penalty and do not wish them put to death”? More recently, and referring to terrorists, Beasley spoke of “elimination”, a term one would hope he does not employ too frequently.

In a related example, years ago a colleague of mine stated support for the hanging of two Australians by Malaysian authorities, both small-time players in the heroin trade, a trade, we should remind ourselves that can only flourish with the involvement of corrupt officials. At the time my colleague's son was going through the typically troubled times of male adolescence, smoking marijuana and abusing that other commonly abused drug, alcohol. There is an irony with the marijuana use, since my colleague had smoked it in the USA, and dealing in marijuana could have apparently attracted the death penalty in Texas at that time, as it does in parts of Southeast Asia in the present. I asked what his views would be if his son tried heroin in Australia, became addicted, and sold some to support his habit. Should he be put to death? "Well, we don't do that in Australia...so, of course not". My incredulity at the reply puzzled him. Again, it was acceptable for South-East Asians to execute minor Australian drug traffickers but we were above this sort of behaviour ourselves.

Matters of high humanist principle, claimed by both the Liberal or Labour parties, are just too readily assigned to the backseat. Our government proudly announces that we are the staunches of allies with the USA, a nation with an unenviable record on execution. What of numerous judicial deaths of the innocents, and particularly innocent blacks? Is there a more hypocritical form of racism? Where is our loud condemnation of this American practice? And along with the Americans we claim friendship with the ruling Saudi elite, who trapped in the primitiveness of the Middle Ages,

arrange for people to be publicly beheaded or occasionally stoned to death. The attitude of our Government reflects our low tolerance of decisions which negatively impinge on the economy — what are a few dismembered heads when oil prices could climb? Where would our allies land their bombers? We should be ashamed of ourselves.

Individually, we are deeply driven by our biology, and will have little success facing the more immoral, violent and irrational aspects of our behaviour by ignoring the fact. Nevertheless, justice is not served by the cry for vengeance, and the more civilized societies, including our own, have done away with the death penalty. However, in our less than perfect democracy, who wins government is often a matter of who can best manipulate the fears and prejudices of the population, so our Prime Minister and previous Opposition leader both approve of the death penalty for deserving Asians after the horror of the Bali bombings. This approach, coupled with the Government's deafening silence on use of the death penalty when applied to hundreds of non-Australians each year, could only have harmed our attempts to save the life of the young Melbourne man hanged recently in Singapore.

A society will always require moral leadership. Thankfully we have notable humanitarians, including many leading members of the established Churches and minor political parties who provide it — their opposition to the death penalty is unconditional. But more high profile and international debate is needed. Regardless of global concerns, the issue will directly affect us for some time to come. The Aus-

tralian currently destined for execution in South East Asia are unlikely to be the last.

More information

Numerous summaries are available on the internet, with general agreement on, for example, the number of innocents executed in the USA, the cost of executions, and the lack of a deterrent effect. That African-Americans, other minorities, and the poor generally have a reduced chance of avoiding the death penalty, is also agreed on.

Amnesty International

www.amnestyusa.org/abolish/index.do

Combat Law, vol 2, issue 2

www.indiatogether.org/combatlaw/vol2/issue2/deathmyth.htm

Death Penalty Information Centre

www.deathpenaltyinfo.org

Geoffrey Robertson, the internationally renowned QC who has played a major role in having the abolitionist point of view win ground, discusses the anachronism of the death penalty in some detail in his book *The Justice Game* (Vintage, 1999). His chapter on the death penalty finishes with this statement:

John Bright said it all in 1850: 'If you wish to teach the people to reverence human life, you must first show that reverence yourself'.

Evidence-based counter argument that supports use of the death penalty is hard to find.



Moving?

Don't forget to notify us of your new address.

Food Irradiation: Fact and Fiction

Don't let the facts spoil a good scare story

Irradiation does not significantly increase the temperature or change the physical or sensory characteristics of most foods. An irradiated apple will still be crisp and juicy. However, irradiation cannot be used with all foods. It causes undesirable flavour changes in dairy products and it causes tissue softening in some fruits, such as peaches and nectarines.

Food irradiation exposes certain types of food to a source of ionising energy. Under the standard covering the irradiation of food in Australia, this energy can be in the form of cobalt 60-sourced gamma rays, machine-generated X-rays, or an electrically generated electron beam.

(www.consumersonline.gov.au/content/food/Irradiated.asp)

How Does Irradiation Work?

All ionizing radiation is able to remove an electron from an atom or molecule, making it highly reactive. The reactive molecules react with other molecules damaging the cell's molecular machinery and processes. Most cellular machinery can be effectively repaired, however high doses can be sufficient to destroy cells outright. Cells in the process of replication are more severely affected than other cells. The molecular damage of irradiation: inhibits sprouting; delays ripening and ageing; kills or sterilises some insects and parasites; reduces the levels of bacteria and therefore increases shelf life.

Irradiation Methods

Electron beam irradiation uses electrons accelerated in an electric field to a velocity close to the speed of light. Electrons do not penetrate the product beyond a few inches, making it necessary to treat fruit and vegetables individually; on the other hand, treatment times are only a few seconds.

Gamma radiation is radiation of photons in the gamma part of the spectrum. The radiation is obtained through the use of radioisotopes, generally cobalt 60 or in very few cases cesium 137. It is the most cost-effective technology and is preferred by many processors because the good penetration enables administering treatment to entire industrial pallets or totes, greatly reducing the need for material handling. A pallet or tote is typically exposed for several minutes depending on dose.

X-Ray irradiation is similar to gamma radiation, x-rays are a lower-energy substitute for the latter. These systems are scalable and have good penetration, with the added benefit of using an electronic source that stops radiating when switched off. They also permit very good dose uniformity. However these systems require a great deal of electrical energy when operating, and exposure times are longer than with gamma rays.

Radioactive materials usually release alpha particles (helium nuclei), beta particles (quickly moving electrons or



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positrons) or gamma rays. Alpha and beta rays can often be shielded by a piece of paper or a sheet of aluminium, respectively.

Gamma rays are less ionizing than either alpha or beta rays, but protection against them requires thicker shielding. They produce damage similar to that caused by X-rays such as burns, cancer, and genetic mutations.

(Definitions from www.wikipedia.org).

The energy waves are not retained in the food, just as food cooked in a microwave oven or teeth and bones that have been X-rayed do not retain those energy waves.

Irradiation Dosages

Levels of absorbed radiation are currently measured in kilograys (kGy). The scientific community has defined three levels of food irradiation.

- Low dose, up to 1kGy: kills insects on fruit and grain and kills or prevents the maturation of *Trichinella*.
- Medium dose, 1–10 kGy: kills most of the bacteria that cause foodborne illness (1.5–3.0 kGy for poultry).
- High dose, 10+ kGy: can sterilize meat and other foods and decontaminate herbs and spices.

Is Irradiation a New Process?

The process of irradiation for food preservation was patented in 1905 by a French scientist. American research began in 1921 when the US Department of Agriculture reported that irradiation would effectively kill *trichinae* in pork. Since then it has gradually gathered momentum with improvements in the technology and the need for new methods to combat foodborne illness.

(www.fmi.org/media/bg/irradiation.pdf)

Nutrient Losses from Irradiation?

Many of the molecules our body requires can be made (manufactured internally) from the broken molecular bits and pieces absorbed via our digestive tract. However, there are some nutrients we can't make *de novo* (from scratch). Most animals don't need to eat vitamin C because their bodies can manufacture it. We humans also have the requisite genes but one does not work because of mutation. To remain healthy, we therefore must consume food containing vitamin C.

There are many nutrients our bodies cannot make from scratch, so it is important that our food contains them. A joint FAO/IAEA/WHO study concluded that "food irradiated to any dose appropriate to achieve the intended technological objective is

both safe to consume and nutritionally adequate." The Australia New Zealand Food Safety Council (ANZFSC) stated that irradiated foods will not have any significant impact on the average dietary intakes of essential vitamins and minerals. In 1995 Utah State University Extension food safety specialist Charlotte P. Brennand, PhD, stated in a food safety fact sheet (March 1995, FN-250.8): "nutritional losses are less than or about the same as cooking and freezing." Most sources estimate 5–10 percent of vitamin C is lost in food irradiation.

Phytochemicals are plant compounds that have health-promoting effects (Hauner and Watzl, 2001 ; Watzl, 2001). According to the article 'Phytochemicals in Fruit and Vegetables: Health Promotion and Postharvest Elicitors' by Schreiner, Monika; Huyskens-Keil, Susanne, specific postharvest elicitor treatments, such as ultraviolet and gamma irradiation might enhance phytochemical content. www.redorbit.com/news/display/?id=543640

Danger from Radioactive Food?

Some people are concerned that irradiated food will be made radioactive.

Radioactivity [is the] disposition of some elements to undergo spontaneous disintegration of their nuclei

Table 1. Vitamin content comparison of cooked chicken (irradiated and not irradiated) Amounts are for 1 kilogram cooked chicken. Reference: Journal of Food Processing and Preservation 2:229, 1978

Vitamin	Non-irradiated sample	Irradiated sample
Vitamin A (international units)	2200	2450
Vitamin E (mg)	3.3	2.15
Thiamin (mg)	0.58	0.42
Riboflavin (mg)	2.10	2.25
Niacin (mg)	58.0	55.5
Vitamin B6 (mg)	1.22	1.35
Vitamin B12 (mg)	21	28
Pantothenic acid (mg)	13	17
Folacin (mg)	0.23	0.18

Food irradiation

associated with the emission of ionizing particles and electromagnetic radiation, as alpha particles or beta particles and gamma radiation. (Henderson's Dictionary of Biological Terms, 10th edition, Eleanor Lawrence)

According to Charlotte P. Brennand, PhD, *"the ionizing radiation used by [food] irradiators is not strong enough to disintegrate the nucleus of even one atom of a food molecule."* The irradiation process involves passing food through an irradiation field; however, the food itself does not ever contact a radioactive substance. Don't be concerned about human mutations occurring as a result of eating irradiated food. Food irradiated in the standard way cannot transmit radioactivity, let alone produce any damage to human DNA. Irradiation is radiant energy which disappears when the energy source is removed. It is physically impossible for food to become radioactive due to the process of food irradiation, just as your teeth do not become radioactive after you have had a dental X-ray.

Genetically Damaged Food

Depending on the type of irradiation used, DNA within the food may or may not be damaged. Some people are concerned that "interesting human mutations" will occur as a result of eating genetically damaged food. We do not absorb (through our GIT) whole strands of DNA ready to code for proteins and ready to be incorporated into our genome. The DNA in food is broken down during digestion. Dietary nucleic acids pass through the stomach to the intestines where they are hydrolyzed by nucleases. The resulting mix of polynucleotides are further cleaved by phosphodiesterases to a mixture of mononucleotides which are hydrolyzed by nucleotidases to give the nucleosides and Pi (phosphate).

Nucleosides are the primary form absorbed in the small intestine. Nucleosides are further broken down to give the constituent bases. A fraction of these bases are transported to

tissues where they are reused for nucleic acid synthesis, but the rest are catabolized (cut up) to produce intermediates of other metabolic processes. It is highly unlikely that a damaged DNA molecule from irradiated food will be incorporated into our chromosomes as there are mechanisms in place that ensure correct molecules are used. Neither the bases nor the nucleotides are required dietary components. We can synthesize them *de novo* and we can also salvage and reuse those we already have.

Thermolytic and Radiolytic Substance

Any kind of food treatment causes chemical changes, and that includes irradiation. The substances produced by irradiation are called radiolytic products just as the chemicals produced by cooking could be called "thermolytic" products.

([www.chem.duke.edu/~j ds/cruise_chem/nuclear/questions.html](http://www.chem.duke.edu/~jds/cruise_chem/nuclear/questions.html)) *"Irradiating meat can produce benzene ... irradiating carbohydrate-rich foods can yield formaldehyde."* Radiolytic products can be found in "cooking, canning and pasteurisation." *"At prescribed dosage levels irradiation produces small amounts of such compounds."* (www.fmi.org/media/bg/irradiation.pdf)

Scientists find the changes in food created by irradiation minor in comparison to those created by cooking. For example, Charlotte P. Brennand, PhD, states this in the food safety fact sheet cited earlier (March 1995, FN-250.8). Evidence can also be found in research literature relating to cytochrome p450 enzymes (multi-purpose enzymes that often handle thermolytic products and much more). So if you are serious about not eating irradiated food because of radiolytic products, you should be serious about giving up cooked food.

Some people are concerned that irradiation will result in the formation of stereoisomers. Stereoisomers are molecules that are composed of the same atoms but the arrangement of those atoms differs in such a way that the molecules are mirror images (of each other) that cannot be super-

imposed (just like a left and right hand). A left-hand glove does not fit a right hand. This property is known as chirality.

All but one of the 20 naturally occurring amino acids (building blocks of proteins) are chiral and are made naturally in a "left-handed" form. Molecules of natural sugars are almost all made naturally in the "right-handed" form, including the sugar that occurs in DNA. When molecules are manufactured in a biological system, usually only one of the stereoisomers is made (eg, ribose is usually made right-handed). However, whenever these molecules are synthesised artificially, approximately half will be one stereoisomer and half will be the other. This can be a problem for the body, because it is prepared to handle the naturally occurring form.

This is what happened in the Thalidomide fiasco. One of the Thalidomide stereoisomers can be easily cleared by the body; the other is not easily cleared. Nowadays regulated pharmaceuticals have the non-biological isomer product removed so that the body can process and eliminate the drug. So if you are worried about irradiation because of stereoisomer formation, then you shouldn't be buying unregulated tablets or capsules of vitamin E, synthesised amino acids or synthesised sugars unless you know the stereoisomers have been removed.

Old molecules that have been synthesised biologically are known to flip to the other isomeric form for no apparent reason. So if you are concerned about stereoisomers, you should think twice about consuming "old" food, eg, herbs that are not freshly picked. The problems with stereoisomers are well known and regulated in the pharmaceutical industry. Since irradiation is regulated, I would hope any problem of stereoisomer formation would have been taken into consideration.

Independent scientific research on the subject [radiolytic products produced by food irradiation] has been extensive, leading to endorsement of food irradiation by the U.S. Food

and Drug Administration, the United States Department of Agriculture and the U.N. World Health Organization as a safe, effective process.

The effects of food irradiation have been studied for over 60 years. (www.wikipedia.org)

Other Irradiation Affecting Food

Gamma or neutron irradiation is often used in conjunction with other techniques, to produce new genetic lines of root and tuber crops, cereals and oil seed crops. New kinds of sorghum, garlic, wheat, bananas, beans and peppers are more resistant to pests and more adaptable to harsh climatic conditions. In Mali, irradiation of sorghum and rice seeds has produced more productive and marketable varieties. (www.uic.com.au/peac.htm)

Irradiated Foods Overseas:

More than 50 countries have approved irradiation for about 50 products according to the International Atomic Energy Agency (IAEA), and 33 are irradiating foods and spices commercially. Table 2 below provides a partial listing based on data furnished by WHO, FAO and IAEA.

Chile irradiates about 130 metric tons (mt) per year, mostly spices, according to Nordion. Russia treats 400,000 mt each year, mostly to eliminate insect infestations from imported grain coming into its port of Odessa. China irradiates garlic to

prevent sprouting and Japan treats potatoes for the same reason. France irradiates poultry to control contamination. (www.fmi.org/media/bg/irradiation.pdf)

Conclusion

Currently, fresh appears to be best but I would not say “no” to an irradiated apple or tropical fruit.

A slightly shorter version of this article was published in the California Rare Fruit Growers' magazine Fruit Gardener, July/August 2006.



Table 2 A partial listing of irradiated food based on data furnished by WHO, FAO and IAEA.

Irradiated Foods in Australia and New Zealand

What irradiated foods are currently approved in Australia and New Zealand? Approval was granted in September 2001 for the use of irradiation on herbs, spices and herbal infusions for control of microbes and for reduction of pests of quarantine concern. In March 2003, the Food Standards Code was changed to allow the irradiation of the tropical fruits: breadfruit, carambola, custard apple, litchi, longan, mango, mangosteen, papaya and rambutan as a pest disinfection measure for pests such as the fruit fly. The permission is for irradiation to a maximum of 1 kGy from machine-sourced electron beams or x-rays. Irradiated tropical fruits require mandatory labeling.

www.foodstandards.gov.au/mediareleasespublications/factsheets/factsheets2003/foodirradiationupdat1943.cfm

	Avocados	Cereals	Cocoa Beans	Fish	Garlic	Herbs	Mangoes	Mushrooms	Onions	Papaya	Pork	Potatoes	Poultry	Red meat	Rice	Spices	Strawberries	Wheat
Argentina																		
Bangladesh																		
Belgium																		
Brazil																		
Canada																		
Chile																		
China																		
Cuba																		
Denmark																		
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United Kingdom																		
United States																		

WA Skeptics Awards

Young Critical Writers Have A Field Day

Junior mythbusters rise to the challenge

After months of planning and discussion, a pilot trial of the WA Skeptics Awards for Young Critical Writers was launched in February 2006.

Aim: to encourage critical thinking and writing by students in Years 8-12 at WA secondary schools.

Topic: any curious belief or claim, not necessarily current or popular, but which is testable.

Philosophy: adult believers rarely embrace critical thinking, so we must reach young people before they get set in their ways.

Means: half a dozen brochures sent to each of the 96 largest WA secondary schools in metro and country areas (out of a total of 369), representing about 92,000 students or two-thirds of the total.

Details and a downloadable brochure were also posted on the skeptics website.

A tested model

We were fortunate in having a tested model to follow, namely the Tim Winton Award for Young Writers (TWA), an annual award to encourage creative writing by students in years 1-12 (ages 5-17) at Perth metro schools. Each year the TWA reaches 230,000 students in over 620 schools including 440 primary. When the TWA was launched in 1993 it attracted 400 entries. Today it attracts 1700 entries annually and takes

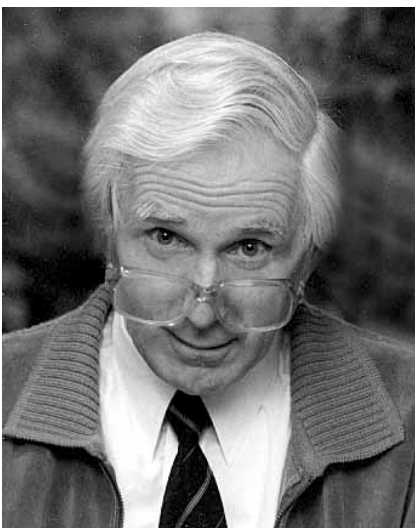
several judges up to three months to mark. Entries are judged in five categories depending on age. Each category has three prizes each consisting of a book voucher, trophy, and certificate, of which the last is generally the most valued. The proportion of students entering the TWA shows a notable but perhaps unsurprising decrease with increasing age — primary 1 in 110, lower secondary 1 in 210, upper secondary 1 in 550.

Design

Much of the WA Skeptics Awards is modelled on the TWA. We adopted the same timing (mailout in the second week of the post-Christmas school term, deadline end of May), the same format (length not over 2000 words, must be student's own unaided work), the same procedure (promotion via brochures addressed to the school principal), and the same emphasis on certificates.

The biggest difference lies in the guidance given in our brochure. In contrast to the TWA brochure, which says nothing about creative writing or what the judges look for (no doubt because self-evident), our brochure was obliged to say a great deal about critical writing and what the judges look for, simply because these things are not self-evident. So our brochure gives plenty of examples of topics, and plenty of guidance on writing an entry and what judges look for.

Another difference is our requirement that entrants make their own



Geoffrey Dean, a technical editor and CSICOP Fellow, is our WA correspondent

test or survey. Our philosophy here is straightforward: any test or survey, even a simple one, adds to our knowledge base: opinions don't. Also any WA secondary student can enter (not just those in the metro area); there is no three-prize system (all entries achieving merit gain an Award); and joint entries are welcome (the TWA does not allow joint entries).

Finally our brochure specifies that entries will be marked out of ten in each of three areas:

- (1) Clarity and organisation, use of pictures and graphs, use of sources.
- (2) Critical thinking, citing evidence for and against, being thorough.
- (3) Own test or survey, its design, interpretation of results. When entrants know what is expected we are more likely to get entries that deliver the goods.

Refined by discussion

Every detail of our Awards was systematically refined by discussion at our meetings, for example the brochure went through six major revisions (interestingly, the most useful comments came not from our skeptics but from their school-age children), so the final design was truly a collective effort. Skeptics who attended the 2005 National Convention on the Gold Coast may remember our Awards poster and our plea for anyone with experience of similar projects to contact us. The response was zero but at least we tried. WA Skeptics would like to place on record their gratitude to the Tim Winton Award people for their encouragement and for sharing their hard-won experience, thus greatly shortening our own learning curve.

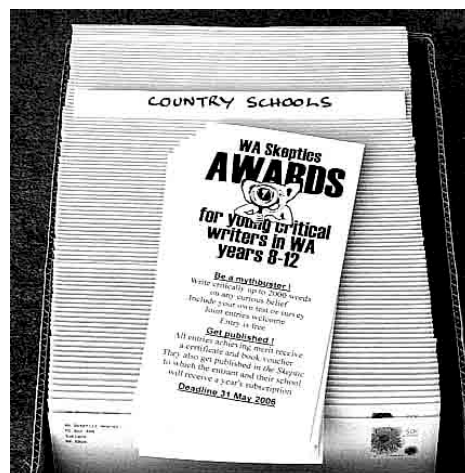
Response

Altogether a total of 27 entrants (1 in 3400 students) sent in a total of nine entries, of which seven were from non-Government schools. No entries were from years 11-12 or from male students. All entries had been word-processed and most had graphs or pictures. The most common fault was not stating the sam-

ple size. As in the TWA, no entries arrived until just before the deadline. Entrants had been asked on the entry form if they would like to receive the judges' marks, and all said yes.

Inspirational

The most inspiring response to our Awards came from the Methodist Ladies' College, a prestigious non-



Government school in suburban Perth, whose Year 10 English class used the Awards as part of a term devoted to skeptical and critical thinking. Teacher Kylie Sturgess told us:

It's been a challenging and fun task for the class ... and I hope that the experience will lead to more entries, a greater range of ages and improved quality from future classes at MLC, now that we've got the ball rolling. Also I have mentioned your Awards to www.skeptic.com in the USA and suggested that perhaps an international one following your model would be in order, since I've found this and the New Zealand oral presentation of a skeptical investigation to be particularly inspirational for schools.

(The last is similar to our Awards except entrants give a talk rather than a written entry.)

If an English class of girls (as opposed to a science class of boys) can adopt our Awards with such enthusiasm, there seems little reason to doubt that other schools might follow suit once our Awards become better known. In the

MLC's case the teachers helped to point the students in the right direction by suggesting sources for reading and how to compile bibliographies (English Dept), and by suggesting graphing strategies and how to think critically (Science Dept). Ideas multiplied as the girls "pondered how to create a double-blind test, find a reasonable sample size, organise independent and dependent variables, and then whether they would be eligible for the James Randi Million Dollar prize if they actually found some truth in the claims". After that the girls were on their own.

Topics

Our 27 junior mythbusters certainly rose to the skeptical challenge. Their topics were generally old favourites, which they approached with youthful verve. In total their tests involved 70 people

WA Skeptics Awards

and their surveys 150 people. Scale this up to all WA secondary schools, and then to all secondary schools Australia-wide (other states will of course want to follow our initiative), and then to all secondary schools worldwide. Skeptics and critical thinking could really make a difference. Think about it.

Year 8

Two entries were from year 8, the youngest category. Bronwyn Ayre, age 12 at Bunbury Catholic College found that daily horoscopes on the web could be “completely different” despite being “for the same star sign on the same day”.

Two more 12 yo’s, Sarah Kain and Charris Thompson, at Narrogin Senior High School, asked 10 people (apparently classmates) 8 questions about their views on the afterlife, spirits, heaven and hell. The answers reflected what the person had been taught or had seen on TV’s *Ghost Whisperer*. Some questions were difficult to answer “because no one answering these questions have died so they are not sure”. The authors concluded that “This was a fun and entertaining experience to find these things out about the afterlife”.

Year 9

In year 9, Alison Gillett and Haylee Neilson, both 13 yo’s at Narrogin Senior High School, compared the newspaper horoscope of “a willing subject” (their teacher?) with the observed behaviour, which was a refreshing change from the much-repeated approach using self-ratings. They concluded that “horoscopes don’t predict the truth”.

Year 10

In year 10, the Methodist Ladies’ English class showed the benefits of teacher guidance on critical thinking. Groups of 3-5 tested ouija boards using blindfolded believers *vs* non believers, with the boards right way up *vs* upside down; Zener cards using believers *vs* nonbelievers and genuine cards *vs* fake (blank) cards; I Ching readings using believers *vs* nonbelievers to rate their accuracy; the effect of Feng Shui images on daily life using images, no images, and hidden images. Their sample sizes were generally 10-20 and the outcomes were uniformly negative. Another group surveyed no less than 100 students and staff to see if their belief in tarot cards varied with age or ethnicity (answer: yes but only slightly, the least believing being teachers and Aussies).

Marking

Through much discussion we had adopted a checklist specifying what was to be judged (a repeat of what our brochure said) and the maximum mark that could be allocated. For example, under clarity and organisation we specified the maximum mark for giving an abstract, for introducing topic, for using headings, for using pictures and graphs, for absence of padding, for citing sources, and for stating conclusions. In practice the entries confirmed normal teacher experience, namely that such detail was hardly needed when preparing a short list. Nevertheless it came into its own when judging the short list because it maximised uniformity between judges, and ensured that marking would be on agreed criteria and not on some

judge’s pet ideas. All entries were scrutinised by three judges, and they were unanimous about which entries achieved merit.

A new category

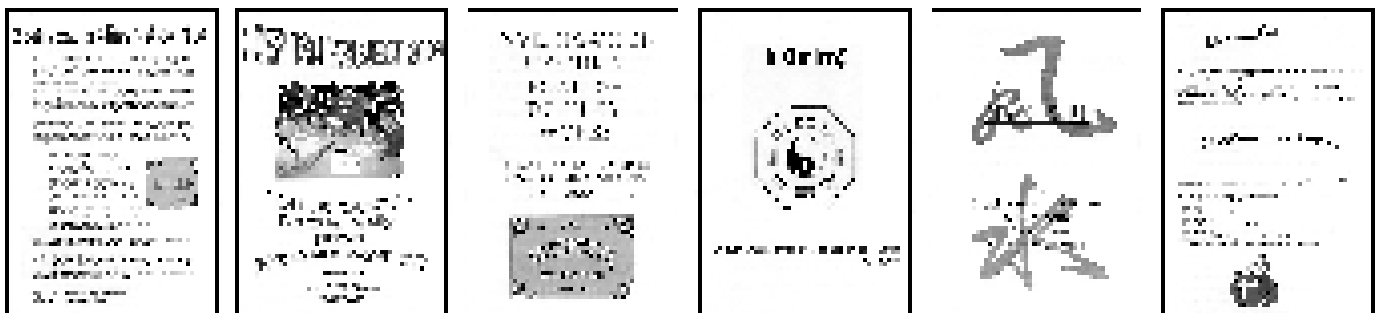
Unlike the TWA our Awards are not a competition, nor are they ranked into first, second, or third. They are given to every entry that, in the opinion of the judges, achieves merit. But the diversity of ideas led us to create a new category of Honourable Mention for entries not achieving full merit status but which had a novel or imaginative feature that warranted recognition.

Results

Two entries received Awards and two entries received Honourable Mentions. Award recipients and Honourable Mentions get a signed certificate, and their school gets a year’s subscription to *the Skeptic*. Award recipients also receive a skeptic shopping bag and a year’s subscription to *the Skeptic*. (Our original idea was to give a book voucher with each Award, to be shared if a joint entry, but sharing between 4-5 entrants would have lost too much individual value, so we gave each a shopping bag instead.) Finally, successful entries would be published in *the Skeptic* either in full or as a summary. Abridged versions of the four successful entries begin on the next page.

Award presentation

The two entries that achieved Awards were from students at the Methodist Ladies’ College in the metro area, so instead of mailing the Awards we presented them at a WA



Some of the entries. From left: horoscopes, Zener cards, ouija boards, I Ching, Feng Shui, the afterlife.



WA Skeptics Awards post mortem. Behind the end table from left are Julie Fitzpatrick (meeting organiser), Polly Bronson (formerly our secretary), and John Happs (president). Kylie Sturgess is next on right.

Skeptics meeting. Many students were on holiday, but three students, two parents, and Kylie Sturgess were able to attend, see later pictures.

We asked the students questions. How did they choose their topic? "It was something the others weren't doing". Then what? "We found out about it". What did they like most about being entrants? "It was fun finding out". What did they like least? "People not co-operating by not answering our survey".

Post mortem

After the students and parents had left, the meeting discussed with Kylie Sturgess some of the issues raised by the poor response (only one entrant for every four schools circularised). Earlier we discovered that Kylie had been one of thirteen moderators for the James Randi Educational Foundation and had a large collection of skeptic books, so we were keen to hear her views.

Perhaps the poor response was not unexpected, given that teachers are too busy to bother with anything new that looks like junk mail and might mean extracurricular work, for which WA Government schools (but not non-Government schools) have no provision for compensation. In which case the answer might be to stress that our Awards lead to better thinking by students without extra work for teachers, and teachers everywhere might take notice.

But Kylie suggested that a better answer might be to make the Awards

relevant to the classroom. At present the Awards brochure is full of useful information but it is geared to the individual. To make it relevant to the classroom she had to cut it up and re-present it on separate pages with headings such as "Analysing the Task", "Finding Information", and "Writing the Report", where each one-liner in the brochure was expanded with the hints, tips, and reminders needed for class use.

Such an approach might involve:

(1) Generating classroom material (this is the hard part but others in the skeptics fraternity may have done it already) and putting it on a website.

(2) Circularising schools about this material at the start of the academic year, eg, through the WA Education Department's monthly newsletter *School Matters*.

(3) Keeping the present Skeptics Awards as an option where students could enter their class work.

WA Skeptics will be following up on these leads. Watch this space.

Winning Entries

The following winning entries have been abridged. Wherever possible (which is most of the time) the original wording has been retained.



From left: Dr John Happs, president of WA Skeptics, I Ching awardees Sumay Chan, Sonya Chu, and Sarah Ng, and MLC English teacher Kylie Sturgess.

Honourable Mention

Feng Shui

Stephanie van Lohuizen, Milly Meares, Kate Scheer, and Brit-tany Whitehead Ages 14-15, year 10, Methodist Ladies' College.

Abstract:

For our Skeptics Project, our group investigated an aspect of Feng Shui and its effect on life.

Claim:

This particular claim relating to Feng Shui states that by attaching or including an image relating to a positive aspect of life to a person's workspace, the life of the individual will improve in this area.

Our Hypothesis:

We believed that our survey would show results irrelevant to the image we attached to the school desk of the individual. Whether they see the image beforehand or not, we thought it most likely that a simple image stuck to a desk would not influence their life.

The Results:

The results proved our hypothesis accurate. We distributed a survey throughout the class asking whether their life had improved, worsened, or not changed, and in what aspect. We repeated this twice more afterwards, this time including images. In one of the two repeats, the individual would not see the image of the certain life aspect. In the final trial, the image would be revealed. For each of the runs of the experiment, the same survey was given to each person. It was filled out respectively, however results showed that, whether an aspect of their life had altered or not, the image attached to each desk played no influence. Our results therefore proved to be random, and indeed, irrelevant to the image we attached to each persons desk. Therefore this particular practise of Feng Shui would not be an accurate way to enhance an aspect of life. It may help in creating a motivation. However, as our experiment has concluded, it does not improve luck and aspects of the life of an individual.

Honourable Mention

Zodiacs. Believe it or Not!

Alison Gillett and Haylee Neilson Age 13, year 9, Narrogin Senior High School, Narrogin

We are going to test whether Zodiacs are true by surveying a willing Cancer subject [their teacher?] for two half-days. The horoscope will be taken from *The West Australian*.

Day 1. Average Day. *Feeling of boredom or dissatisfaction can be blamed on your ruling Moon. Today marks the end of a month long phase and from tomorrow onwards you can expect more variety, greater contentment and positive feedback.*

We started observing the subject from 9:00am to 12:30pm. We could not see anything in the prediction that really stood out as something to watch for, something to really prove our point. However, we questioned our subject on whether or not they had been feeling bored or dissatisfied and they answered no!

Day 2. Positive Day. *Moon in your signs gives the impression of vulnerability, but inner strength keeps you resilient. Latent talents or desires could surface soon and others will be stunned as the layers of your personality are peeled away.*

We observed the subject from 11:30am to 3:23pm. Again, nothing really stood out in the horoscope prediction but we thought that the hidden talents might begin to show. However, no new talents were shown and we could not see other people stunned by our subject's personality. It was disappointing that the star signs didn't put up more of a fight and show us some real magic but that's that!

From our study, we came to the conclusion that the horoscopes don't predict the truth. It's probably just somebody sitting in an office, with the job of pulling twelve random predictions out of nowhere. We found nothing except for the fact that some horoscopes don't actually predict anything. Weird, hey!

WA Skeptics Award

Skepticism: I Ching

Sonya Chu, Sarah Ng and Sumay Chan Age 14, year 10, Methodist Ladies' College, Claremont

Abstract:

Over a period of around one month, research was conducted to test the accuracy of the predictions made by I Ching, a method of divination which originated from Ancient China. The readings it gives are decided by chance, or for those who believe in it, by synchronicity. The analysis of results revealed that for the group which were surveyed, I Ching did not prove to be accurate for a majority. Those who believed in divination were more likely to respond that their I Ching reading was more accurate.

We also conducted searches [too lengthy to be described here] into what others have already contributed to the testing of the I Ching. A large part of our research effort went into investigating synchronicity and the challenge of that phenomenon. It was concluded that a challenge to the validity of synchronicity would also be a challenge to the validity of I Ching. However the proofs against appear to be much stronger than the arguments for. Coincidence can be proved to be nothing amazing and especially meaningful (that is, not a case of synchronicity), as they are inevitable and simply the human mind making life interesting by looking for patterns.

Background.

I Ching is the *Book of Changes* that is one of the most ancient and important literary works in the history of China. There are a total of 64 I Ching hexagrams (the form of the readings is in six lines, known as hexagrams) created by the throwing of coins or yarrow stalks. These hexagrams are supposedly mathematically based patterns that represent all the structure and changes that occur in our universe.

Each of the I Ching hexagrams consists of a few verses of text that are used to predict the future. These verses are often mystical sounding and have a far deeper and multiple meaning than the words that are presented on the paper. Some people believe that the author of this book was Fu His, the first emperor of China in times as early as 3322 BC.

Synchronicity.

According to Carl Jung, synchronicity is a principle where “no causal connection can be demonstrated between two events, but where a meaningful relationship nevertheless exists between them, a wholly different type of principle is likely to be operating”. He believed that if one event occurs, another one will coincidentally happen as a result of the first event. It is the idea that coincidence occurs because of some “greater force” or because of a greater pattern in the world.

I Ching and Society.

During our survey we found that nearly no-one had ever used the method of I Ching before or even heard of it. Although Australia is greatly influenced by different cultures from all over the world, it was obvious that I Ching has not had a significant influence on the lifestyles of people here.

Although in general I Ching has little influence on our society it does make up an important part of some people’s lives. As with any other mystic revelation, I Ching does have its cult followers. We came across many stories of people who believe I Ching has the ability to accurately predict the future and to make the right decisions for them, including a master’s thesis which tested and calculated (albeit not very scientifically) the accuracy of I Ching for divination: Granillo, Tony (1998) *Exploring Prediction and Meaning through the I Ching Oracle*, Antioch University, Seattle.

Method:

We surveyed a number of people, mostly girls aged 13-15 [seemingly N



Bag ladies start young in WA

= 21]. We began by getting them to throw three 10 cent coins, which were used to determine their I Ching hexagram. But their actual reading from the *Book of Change* would not be looked at until the next week to ensure that our investigation was as objective as possible. After taking down the reading, we got the people to fill in their answers to a set of 4 questions using a 5-point Likert Scale. One week later, we revisited these people and requested that they tell us the high points, low points and major decisions of their past week. We then gave them a reading that was based upon the hexagram that was made the previous week from their coin throwing. However, for some of the people, we gave them fake readings. We then asked them to rate their reading for accuracy on a scale of one to five. The *Book of Change* used in this investigation was: Wang, Ronpei & Ren, Xiuhua (Translators) (1993), *Book of Change*, Shanghai Foreign Language Education Press, Shanghai.

Results of Survey.

[For simplicity their 5-point scales have been collapsed to 3-point]

I believe in the ability to predict the future.

15% believed, 23% neutral, 51% disbelieved.

Horoscopes and fortune telling has often read true for me before.

15% often, 29% neutral, 57% hardly ever.

I consult horoscopes and other fortune telling methods.

100% hardly ever.

Horoscopes and other fortune telling methods affect the way I live my day to day life.

5% often, 95% hardly ever.

Your I Ching reading closely matched what happened to you in the past week.

57% no, 24% not close but not wrong either, 19% yes.

Discussion.

As we only gathered results from a group comprising mostly of girls aged 13 to 15 years old, our results cannot be justifiably applied to every case in general. Our first four questions found that many people did not consult divination regularly and that most did not believe it to be particularly accurate in prediction. For question 5, 38% of surveyees felt that their reading was completely inaccurate, and 19% felt it was fairly inaccurate. On the other hand, 19% felt it was fairly accurate in its prediction of their past week, however none felt that it was a miraculous perfect match. From this we conclude that I Ching itself is not an accurate divination method (indeed, it may be that there is not such thing as an accurate divination method).

We soon gathered that there was a relationship between how much the surveyee believed in I Ching and divination and whether they thought the reading was accurate. We noted that all those who felt their reading was completely inaccurate were generally strong disbelievers and non-users.

Some samples of the responses to fake readings:

One surveyee said she disbelieved in divination, but said that predictions had sometimes read true for her previously. She rated her reading as not close but not wrong either. Another said that she strongly disbelieved in divination, but said that

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predictions had sometimes read true for her previously. She rated her reading as a “pretty close match”, although it was false.

These results, along with other results, give evidence that it is the belief in the divination that makes the divination “accurate” in their prediction. Some disbelievers commented that if they believed in divination, they could see how the reading could possibly relate to what had happened to them, but felt that in reality the readings were sham.

Conclusion.

We found that I Ching was not consistent in accurate prediction of the future, and that whether or not it was “accurate” depended upon the view of the person about divination, that is, if they believed in the accuracy of divination and that it worked, it was more likely that they would say that their reading would be accurate. The human mind likes to find meaning and pattern in its environment and so remembers the patterns that do occur and forgets the parts where the patterns fall apart.

Our research has not a large enough sample size or range in order to completely prove or disprove whether I Ching is accurate, but the trends we have seen lean towards a “maybe not”. Carl Jung said in his *Foreword to Lectures on the I Ching* “In the I Ching, the only criterion of the validity of synchronicity is the observer’s opinion that the text of the hexagram amounts to a true rendering of his psychic condition”. We have discovered that in “the observer’s opinion” the “text of the hexagram” did not amount “to a true rendering of his psychic condition”, so our results on I Ching also dispute the validity of synchronicity.

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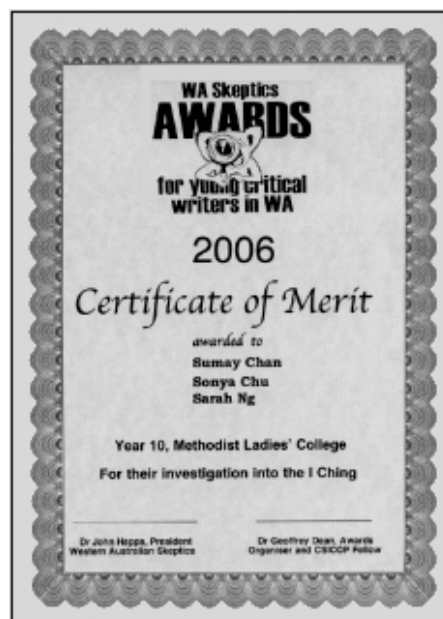
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WA Skeptics Award

A study of a population of 100 Methodist Ladies' College students and staff upon belief in accuracy of Tarot Cards

Adeline Loh, Tam Nateethong, Nicole Teow, and Caitlyn Jones
Ages 14-15, year 10, Methodist Ladies' College, Claremont

Abstract:

The paranormal claim that we investigated was that younger teenagers aged 12-13 would have a higher belief in tarot cards than older teenagers aged 14 and older. We also thought the backgrounds of people would have an affect on their beliefs, European and Asian backgrounds would provide a higher rate of belief that the Australian background, who we think would be slightly more sceptical to tarot cards. We designed a survey to test our audience and their perceptions of tarot cards and how much faith they put in this paranormal claim. Results showed that the older teenage group had a higher belief in tarot cards than the younger ones, which went against our original expectation about belief in this paranormal claim.

Introduction, Evidence For and Against:

The way the cards are read differs according to which source you believe. One source says to simply “Come up with your own card meanings and descriptions to personalize your reading style. Don’t be afraid to follow your instincts”. [E-how, 1999] Which could mean one of two things. One is that the meanings are simply made up out of the readers own mind depending on what they feel like, with no real prediction or true answers being offered. The other is that the card interpretations actually come from psychic powers, so the cards are actually directing what you are interpreting. But the reading of the cards is very vague, it is even hard to define what tarot cards are supposed to tell you in the first place. “Assigning a specific meaning for tarot cards,

across all decks and spreads, is quite impossible". [About, 2006] So how can we be sure about what they are telling us, and which ones are real?

On the internet, there is a blog from an author unknown [Kontroller X] who claims to have conducted an informal experiment by creating their own fake set of tarot cards with different meanings. They tested their cards on a small group of people with varying beliefs, and noted that most people did say that it was correct and the reading told them a lot about their lives.

A good example or the yes/no sides of tarot can be seen in an online forum where to people make comments to each other back and forth about tarot cards and how they could be tested. They relate tarot card reading to a game of 20 questions; which brings us to the conclusion that it is not actually telling the future, just cherry picking by the reader until they get the right answer. It's interesting to see that the cards are more of a medium and what they tell us isn't important. This leaves us with the question, "Then why bother with them?" [Doctor X, 2005]. What does make these cards so special if they are only pieces of paper?

In researching Tarot Cards, we looked at several sources in order to understand its origins and also the supposed effects and benefits of using them, as well as any counter-arguments to the effects and benefits. We also visited several sites that give some personal opinions about the Tarot Cards. We found out that some of the sites tend to believe in the Cards whilst some do not.

Our Study Aim:

To investigate the widespread belief of tarot cards based on factors of ethnicity and age. Procedure: (1) The target audience of Year 8, 10 and 12 students and some MLC staff was

decided. The total number of people tested being 100. (2) A survey to test the target audience's awareness and belief in tarot cards was designed. (3) The surveys were distributed. (4) The results were recorded. Hypotheses : (1) The younger age group of 12-13 years will be more believing in the tarot cards, and the older age groups less believing. (2) Europeans and Asians will be more believing, and Australians less believing.

fathomed to be a country in Europe. Furthermore their cultural background consists of mystical phenomena such as tarot cards. Australians proved to be the most disbelieving group. This could be due to their cosmopolitan lifestyle, which has no room for mystical beings. Asians were the most unsure group. This could be due to clashing of tarot cards with other Asian mystical beliefs consisting of anything from black magic to feng shui.

Results as % of N			
N	Bv	Un	Sk
Ages 12-13	0	54	46
Ages 14-16	16	37	47
Ages 17-53	11	47	42
European	37	38	25
Asian	10	51	39
Australian	8	38	54

Bv=Believer, Un=Unsure, Sk=Skeptic.

Limitations of the Survey:

Sample could have been larger and more varied, allowing more control of variables. The Year 11's and 12's were having exams at the time and were difficult to get hold of, thus limiting the target audience across the high school. The sample chosen could have had an impact on the survey due to the standardised environment of which they came from (Methodist Ladies' College).

Conclusion:

Hypothesis (1) was not confirmed. People in the age group of 14-16 years proved to be the most believing group. Hypothesis (2) was confirmed. Europeans proved to be the sample group more believing in the accuracy of tarot cards, probably due to the country of origin of tarot, which is

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Hallelujah!

Godless in California

Spending a day among free thinkers



Karen Stollznow, a linguist, is our expat North American correspondent, who still calls Australia home. <kstollznow@berkeley.edu>.

Many would argue that the only true position for a skeptic is agnosticism. However, there are parallels between skepticism and atheism, even beyond the bearded and bespectacled.

For some time I've been attending monthly seminars held by the East Bay Atheists (www.eastbayatheists.org/). This is an active crowd, with the enthusiasm, good humour and skepticism of our own organisation. My first encounter with the group was at a local fair, where I was handed a booklet entitled: *What God Has Revealed To Man*. It was blank. The author was the mystical-sounding Stsiehta Yab Tsae (think about it!). This group, along with the San Francisco Atheists and the Atheists of Silicon Valley, comprise the Northern Californian arm of the American Atheists (AA); a recovery program for those suffering from the effects of religion.

And so, to get my skeptical fix I attended the West Coast Regional Atheist Meet. This was a day long event held at a hotel south of San Francisco, a marathon of atheism and activism. Here are some highlights and 'nuggets of wisdom' of the day.

Freedom from religion

The first speaker was Ellen Johnson, President of the AA. Various figures report that there are between 41-54 million atheists in the United States,

roughly one sixth of the population. While this section of society has considerable intellectual clout they are still fighting for political representation, for the civil rights of atheists. The organisation's main focus is to enforce the separation of church and state in America. This is no small feat.

The AA provide assistance to people who are "under siege by religious groups", in schools, prisons, the workplace or anywhere. They are active in filing law suits against abuses, where people have been fired, harassed or intimidated for their lack of religious belief. This also extends to the imposition of religion on the non-religious. Some recent causes include: the removal of crosses from water towers, actions against atheist discrimination in schools, the ongoing fight against the manipulation of tax exemption laws by 'religious' groups, and the successful banning of organised prayers, public displays of the ten 'commandments' and religious references in the Pledge of Allegiance.

Lawyer and activist Eddie Tabash recalled his Jewish upbringing, learning about the turbulent history of the persecuted 'Chosen People'. Horrified, Tabash asked his Rabbi, "Why can't God choose somebody else?" Tabash discussed some practical evidence to suggest that 'God' does not exist, and presented a list of simple yet vital questions that need

to be asked in the face of blind faith. Why did miracles occur in Biblical times, yet not today? Why is God so “stingy” with direct evidence? Why is there so much reasonable confusion in the world regarding religions? If our consciousness relies on a physical brain, and can be eclipsed by illness or anaesthetic, how could we have awareness after death? Is the belief in religion just expressing a desire to live after death?

Tabash asserts that evolution is more likely in a godless world. “Evolution by natural selection is sloppy and wasteful. More than 99% of all species that ever existed on Earth are now extinct”. This is not so intelligent design. Tabash claims that modern Americans won’t live to see the secularisation of their society, and predicts a “100 year trajectory” for this to occur. It’s a pity that this coincides with the possible extinction of humankind through global warming (as forecast by evolutionary biologist David Seaborg at a subsequent meeting).

Is critical thinking becoming cool?

Clark Adams presented a talk about the increase of atheism, skepticism and religious satire in popular media. Adams is president of the Internet Infidels (www.infidels.org) a website devoted to atheism, agnosticism, humanism and the scholarly critique of religion. Adams spoke about the emergence of skeptical attitudes in television, radio and online. He claims that the parody of medium John Edward by the cartoon show *South Park* reaches a wider audience and is more successful than any debunking by James Randi or Michael Shermer. From Judaism to Christianity, *South Park* creators Trey Parker and Matt Stone have been unbiased in their lampooning of popular belief systems. However, in the US where free speech extends to everything but Scientology, their spoof of this cult led to (Scientologist) cast member Isaac Hayes (‘Chef’) quitting the show. Furthermore, the episode was banned by the station, Comedy Central, after one airing. Rumour claims

that this ban was by order of Tom Cruise, who allegedly threatened to withdraw promotion of an upcoming film, an accusation that the actor denies. The channel has since re-aired the episode.

Adams explained that satire is a powerful advertisement for skepticism and atheism, even if it isn’t packaged as such. American ‘shock jock’ DJs frequently parody uncritical thinking. The infamous Howard Stern made fun of Jackie Stallone during a segment where she discussed ‘rumpology’, her ability to read bottoms, rather than the traditional palm (See “This Little Piggy”, *the Skeptic* 22:3). Radio host Tom Leykis engages in vigorous debates with creationists, fundamentalists and new agers. Although these hosts never explicitly claim to be skeptics or atheists, they indirectly show this, and successfully further these causes with humour, irony and ‘ribbing’. Adams calls this “reason through ridicule”, especially important for an audience that is not otherwise exposed to critical thinking. To prove his point, Adams played skeptical snippets of popular radio and television shows, including a *West Wing* dialogue, written by Penn Jillette. From Penn and Teller’s *Bullshit!* and TV drama *House*, to comedies *Becker* and *Malcolm in the Middle*, skepticism is entering popular culture, in a palatable form for the public.

Activism doesn’t have to mean fanatically chaining yourself to a tree, or a copy of *The Selfish Gene*, as the case may be. There are many ways that we can show our skepticism, and spread the bad news. A number of activists recounted their heroic displays of atheism. For example, a member from Boise, Idaho ‘stole the thunder’ from the public ‘National Day of Prayer’ group, by hiring their god-given annual ‘spot’ on the steps of the town hall for an atheist meeting. After realising their ‘error’, the city tried to renege on the reservation, and a restraining order had to be arranged, to prevent the city from rescinding the permit.

Many of the suggestions offered apply to skepticism too. What have

you done for skepticism lately? (Of course, you’re already on the right path as you’re reading this!) How can you get involved? Adapted for the discerning skeptic, here are a few ideas to get you started:

- Wear a Skeptic’s badge on your briefcase, backpack or yourself. Get a bumper sticker for your car.
- Attend a Skeptical dinner meeting, convention or Skeptics in the Pub gathering (and bring a friend).
- Buy a skeptical book, subscribe to a skeptical publication (and share them around) or give a gift subscription (hint, hint!).
- Call in to a skeptically challenged radio show and have your say or write a letter to the editor on a skeptical issue.
- Disseminate a Skeptical viewpoint and stand up for skepticism with your friends and family (and enemies!).

Atheism is natural

Dr David Eller is a specialist in the anthropology of religion, and spent two years researching the traditional and contemporary beliefs of Australian Aboriginal people. His book *Natural Atheism* is hailed as ‘the textbook of Atheism’. Eller explained that we are natural born atheists, with no innate knowledge or belief of any gods. There is no religion ‘in the brain’. We are socialised into systems of belief and there are many actual and potential religions. We are argued out of, not into, religion, and the best argument against any religion is the existence of all other religions.

Eller spoke of the analogy between religion and language. ‘Speaking Christian’ supports the Christian worldview. In this way, religion is a language, to speak it is to empower it, make it stronger, and to make it seem real. Religion has its own metalanguage of ‘heaven’, ‘hell’, ‘sin’, ‘salvation’ and ‘god’, all naming concepts rather than concrete ‘things’. Eller added that ‘god’ is poorly and

subjectively defined. Of course, 'god' only appears in theism, not religion in general, that extends beyond monotheism and polytheism to animism and ancestor spirits. Thinking only in terms of 'god' and 'Christianity' is ethnocentric.

Eller quoted linguist Max Mueller's view of religion as a "disease of language" that takes metaphor literally, eg, spirits and demons. Eller also recommended linguist George Lakoff's writings (*Metaphors We Live By*, and *Don't Think of an Elephant*) and mentioned the fashionable concept of re-framing, that language choice can affect perception. In this vein, Eller explained that if we say "there is no god" or "I don't believe in god", this is to reaffirm the idea of 'god'. When we use the language of religious people we are "playing in the sandbox with them". Eller claims that "these people play games with us", when they say "Atheism is a religion", or "Science is a religion". In contrast, neither is true, and atheism is "the absence of religion. Not collecting stamps is not a hobby!"

In closing, Eller mentioned Frank Luntz's *Republican Playbook* and his collection of "14 Words Never to Use" (e.g. "Never say 'Government', instead say 'Washington'". "Never say 'drilling for oil', instead say 'exploring for energy'"). In a similar vein, Eller provided some suggestions for words that atheists should never use. Instead of 'belief', say 'unsupported claim', 'value' or 'confidence'. Instead of 'the Church', say 'churches' or 'Christian church'. Instead of 'religion', talk about 'the religious', or a 'system of unsupported claims'. Instead of the 'Bible', talk about the 'Judaean-Christian writings'. Instead of 'God', talk of 'gods'. When someone asks, 'do you believe in God?' Ask them to 'define that term'. This advice elicited a caution from a member of the audience, that sometimes we need to 'speak the language' of religion, to get our point across. We should choose our battles appropriately, and use the right tools. With this in mind, re-phrasing, or re-framing,

can broaden our minds and teach us all how to think about these topics in new ways.

Bizarre theories

The show stopper was a curious event called the Jesus Jam. No, this wasn't an improvisation of gospel music, it was an onslaught of bizarre theories about Jesus. Clearly inspired by David Letterman, and the *Da Vinci Code* fad, Don Havis provided the 'Top 10 Weirdest Jesus Theories'. Amongst these was a theory espoused in the medieval Jewish anti-gospel, the *Sepher Toldoth Yeshu*¹. This presents Jesus (Yeshua) as a magician. This was no immaculate conception, instead it is claimed that Jesus was the bastard son of Mary, a simple hairdresser, and Joseph, a Roman soldier. For meddling in the dark arts, this Jesus, and his five disciples, were stoned to death by a group of prominent rabbis.

Did Jesus really rise from the dead, or had he really been dead at all? First proposed 150 years ago, the Jesus 'swoon theory' claims that the crucifixion did not actually kill Jesus, He just 'appeared' dead. Substantiated by 150 000 entries on Google, it seems that Jesus only passed out during his horrific ordeal. Three days later, he wasn't resurrected, he 'came to'. Jesus disentangled himself from his burial shroud (the Shroud of Turin?), rolled away the 'large stone' and flit past the guard. Despite his physical state, he walked back to his disciples, on pierced feet, and in his messiah complex he fibbed that he had risen from the dead. Rather than dying for our sins, He died of natural causes, after living out the rest of his days in obscurity. So, I ask you, which is the more credible theory, the Swoon or the Resurrection?

The confusing 'Sacred Mushroom' theory further undermines the Resurrection theory. Biblical Scholar John Allegro² proposes that the Christ death-resurrection myth is merely a literary device to 'cover up' an ancient story associated with a Middle-Eastern mushroom worship-

ping cult. In this theory, the rite of the eucharist really symbolises "the partaking of the sacred fungus". This theory doesn't deserve any further discussion. I am typeless.

Just when you thought He was the son of a simple carpenter, Ralph Ellis³ claims that Jesus is actually the last in a long line of Egyptian pharaohs. Theologian and writer C. S. Lewis⁴ takes this one step further, insisting that Jesus was divine. No, this wasn't from *The Lion, The Witch and the Wardrobe*. This was part of Lewis' "Lord, Lunatic or Liar" theory. Lewis argued that Jesus must fall under one of these categories:

A man who was merely a man and said the sort of things Jesus said would not be a great moral teacher. He would either be a lunatic — on a level with a man who says he is a poached egg — or he would be the devil of hell. You must take your choice. Either this was, and is, the Son of God, or else a madman or something worse.

Despite Jesus' astonishing claims, he was no lunatic or liar. In this profound process of elimination, Jesus was no ordinary human being, he was clearly a god incarnate.

The Number One weird Jesus theory is an argument championed by Dr William Harwood⁵. Havis calls this the "Triple Combo Ugly Jesus, Crazy Jesus and Failed Revolutionary Jesus" theory. Gone are the long curly locks and gentle features. Harwood cites several references that claim Jesus' body was "misshapen", while one Andrew of Crete reported that Jesus had "eyebrows which meet". A medieval source, now mysteriously lost, observed that Jesus was an "odd looking man, balding, stooped, and approximately 4 feet 6 inches tall". Harwood further quotes *Mark 15:7* to support the notion of Jesus as "failed revolutionary". Finally, Harwood quotes *Mark 3:21* which states that when the Roman authorities came to take Jesus into custody, his own family de-

Continued p 30 ...

Food Additives are Dangerous

**Additives add to safety,
not to danger.**

In my last column (24:4) I explained that food additives did not cause allergies. Despite that, it seems that some of the media and self-styled crusaders like to imply that food additives are inherently harmful. Not being perceived as “natural”, it seems easy to generate a lot of attention by implying they are the cause of your fatigue or your child’s poor behaviour.

At a recent presentation I gave, one gentleman was adamant that food was better for you 100 years ago. It is rarely appreciated that 100 years ago there were very few food laws and no food labelling laws. Quite honestly you didn’t know what was in your food.

Before the 1905 *Pure Food Act* legislated in Victoria, food adulteration was common. Milk was often diluted and may even have had chalk added. Anchovies had red paint added for colour and orange or yellow lollies were coloured with lead chromate according to the *Melbourne Argus* published in the mid 1800s. If you enjoy the range of foods available in the supermarket, then be thankful for hygienic food processing plants, the use of food additives and the current stringent food laws.

Additives governed by law

In reality, before it is permitted for use, every additive is thoroughly investigated by food scientists. Each food type is allowed only certain additives in prescribed maximum

amounts as set in food law by Food Standards Australia New Zealand. Food companies do not choose the amount of additive they can use. For example, if a food is preserved through the process of canning, they cannot add any preservative.

Preservatives, like benzoic acid, are added to some foods to prevent bacterial growth, while antioxidants are added to prevent oils and fats becoming rancid. Emulsifiers are added to foods like ice cream and mayonnaise to stop the fat and water from separating (else your ice cream would be just that — ice and cream). Lecithin, derived from the soy bean, is a common emulsifier. Humectants help prevent a food, such as muesli bars, from drying out on the supermarket shelves. Thickeners like pectin, carrageenan and guar, are added to jams and sauces to improve the texture. Sometimes vitamins or minerals are added to replace those lost in processing (eg, vitamins A and D added to margarine) or as part of a public health measure eg, the vitamins, thiamine and folate to avoid *Wernicke’s Encephalopathy* or *spina bifida* respectively.

Big, big safety margin

It is not appreciated by many that the scientists determining food law are very conservative people, wanting to make sure that the food supply is as safe as possible. This should really be no surprise as food scientists have extended family, friends and neighbours whom they certainly



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wish no harm. They don't want to hear that a child has become ill because of a lax food law.

To be certain they cause no harm, scientists first determine the level at which an additive may cause a problem over a lifetime of consumption of the additive. They then set the maximum level permitted in foods at 1% (or less) of that level. In other words, there is at least a 100-fold safety margin built into the laws limiting food additive use. Despite the huge safety margin, many members of the public still want to be promised zero risk from an additive, a demand they don't make of more dangerous goods and activities like the motor car or sun-bathing.

Scare tactics

There are many scare stories about food additives. The artificial sweetener, aspartame is a good example. Despite being the most investigated food additive of all time and having one of the best safety records, people still email hoax stories about aspartame (or Nutrasweet). As it comprises two amino acids, aspartic acid and phenylalanine, the same two you will find in amounts 100s of times larger in every protein food you eat, it shouldn't be surprising that it is harmless.

One concern was that the methyl group that sticks out from phenylalanine gets converted to methanol and then to formaldehyde, both potentially toxic. This is true, but the amounts are well below that which can cause a problem. Volume for volume, tomato juice produces six times more methanol than does diet cola. I don't get emails about the dangers of tomato juice.

The only reason there is a food label warning on products with aspartame is for the 1 in 10 000 children born with a condition called *Phenylketonuria*. They need to know that aspartame provides *phenylalanine*, an amino acid they cannot process properly due to a genetic defect. The other 9999 needn't worry. (*Phenylketonuria* is diagnosed at birth through a blood sample).

Food intolerance

On occasions, some children will suffer a food intolerance. This is mainly due to naturally occurring food chemicals (such as salicylates, biogenic amines and glutamates) and/or food additives (such as preservatives, colourings and flavourings). Food intolerances can occur in both children and adults and can be quite difficult to isolate. Symptoms include skin rashes (recurrent or chronic urticaria or hives), mouth ulcers, wheezing, headaches and digestive problems. For example, the preservative sodium metabisulphite may trigger asthma in 1-2% of asthmatics. A true food intolerance is uncommon and needs to be diagnosed by an expert.

Minimising food additives

If you would like to minimise your intake of food additives, eat well. If the majority of your food is fresh or canned fruit and vegetables, meat, poultry, oil, rice, pasta, polenta, bread, herbs, water and tea, and other minimally processed foods, then your health and well being is likely to be good. Not because you have minimised food additives, but because you have eaten mainly health enhancing foods.

Without food additives it would be difficult to guarantee the safety of the food supply and we could slip back to the 19th century when food was frequently adulterated or spoiled. You are more likely to suffer food poisoning, poor nutrient intake (eg inadequate iron) or an energy imbalance (overweight or underweight) than any harm due to food additives.

As we all appreciate, humans tend to worry about what they don't understand and can't control (food additives, bird flu) yet won't modify what they do understand and can control (poor eating, lack of exercise). This creates a society that thinks more like a victim than a ruler.

More on food additives can be found at:

www.foodstandards.gov.au/newsroom/factsheets/factsheets2006/whatarefoodadditives3233.cfm

... Hallelujah from p 28

clared, "He's gone mad", while other biblical quotes suggest that he was "demon possessed". Did I forget to mention that Harwood is supposedly an atheist biblical scholar?

By the end of the meeting, it seemed that pure skepticism is the luxury of us Aussies, as America is so bogged down by the blurring of religion and society. Having said that, Ken Ham was our gift to the United States⁶ but indeed, this is where the market is.

Overall, the meeting was highly successful and enjoyable. It seems that even God approved. After all, He had spared us His vengeful bolts of lightning. Instead, a large section of the hotel's roof collapsed a few days later, an evening before a Jehovah's Witness convention.

Footnotes:

1 From Zindler, F. 2003. *The Jesus the Jews Never Knew*. American Atheist Press.

2 Allegro, J. 1970. *The Sacred Mushroom and the Cross*. Doubleday. 1971. *The End of the Road*. Dial Press.

3 Ellis, R. 2001. *Jesus - Last of the Pharaoahs*. Adventures Unlimited Press.

4 Lewis, C. S. 2001. *Mere Christianity*. HarperCollins.

5 Harwood, W. 1992. *Mythology's Last Gods*. Prometheus Books.

6 Wallaby, Sir Jim R. Unpublished thesis, which holds that this is Australia's revenge on the USA for Ronald McDonald.



... From previous column

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Science Looks for Bigfoot, Finds Bison

Bigfoot was a busy beastie recently, especially in Canada. In April 2005 a Manitoba ferry operator videotaped a large, dark, indistinct creature moving along a riverbank. Whatever it was—Bigfoot, bear, bison, or otherwise—it caused quite a stir and made international news (see “Bigfoot Video Surfaces in Manitoba”, July/August 2005 *Skeptical Inquirer*).

Three months later, in nearby Yukon province, Teslin resident Trent Smarch found a tuft of coarse, dark hair in a forest where he and other locals heard a large, mysterious animal in the brush. They believe the creature was a Sasquatch, the Canadian version of the huge,



Benjamin Radford, the managing editor of the *Skeptical Inquirer*, wrote “Bigfoot at 50: Evaluating a Half-Century of Bigfoot Evidence” for the March/April 2002 issue.

hairy, humanoid mystery creature known as Bigfoot. The find was reported across North America and around the world, and many wondered if this hair find might finally prove Bigfoot’s long-disputed existence. The hair sample was sent to University of Alberta wildlife geneticist David Coltman for analysis. Coltman was asked to extract any available DNA from the hair, sequence the mitochondrial genes, and compare them to a database of known regional creatures.

By far the majority of support for Bigfoot comes from eyewitness reports and anecdotes, yet this is the least reliable kind of evidence—and virtually worthless from a scientific perspective. What science needs to validate the existence of Bigfoot is hard evidence: a live or dead specimen, bones, teeth, blood, or hair. Because hard evidence is lacking—no bones or bodies have been found—Coltman’s analysis was much anticipated.

The Yukon sample is not the first Bigfoot hair to be analyzed. Over the past few decades, dozens of hair and blood samples have been recovered from alleged Bigfoot encounters. When a definite conclusion has been reached, the samples have invariably turned out to have prosaic sources. On July 28, after a week of testing, the results were announced. Coltman revealed that the Bigfoot hair matched that of a bison 100%. Bison do exist in the region, and it seems likely that the locals’ expectations and perceptions were influenced by the Manitoba sighting

three months earlier. Or it may have been a hoax.

The DNA result will not, of course, deter the Bigfoot believers and eyewitnesses: one discredited sighting does not invalidate others. But this case does provide an excellent example of what happens when hard evidence of a mystery is subjected to the rigors of science. This high-profile Bigfoot hair analysis by a reputable scientist also addresses a criticism often heard by monster enthusiasts: That mainstream scientists ignore Bigfoot evidence for fear of damaging their reputations in pursuit of what some would call a myth. Yet if Bigfoot or other mystery creatures do exist, they are certainly worthy of serious scientific scrutiny. At the same time, since all previous samples were found to be hoaxes, inconclusive, or from known animals, scientists’ lack of enthusiasm for spending time and resources on yet more such evidence is understandable.

Coltman, who usually does research tracking genetic links between populations of animals such as bighorn sheep, was surprised at the strong worldwide interest in Bigfoot and his analysis. The scientist hopes that the publicity surrounding the genetic analysis will carry over into a public understanding of genetics.



Is Spirituality the New CAM?

AltMed goes spiritual, but does it work?

Fashions in so called ‘complementary and alternative medicine’ (CAM), (for which read pre-modern medicine), come and go and there is some evidence that spirituality in both secular and religious forms is emerging as the new boy on the block.

A patient returned to me recently having seen a local surgeon for a preoperative visit to arrange an elective operation. She reported, with a combination of amusement and surprise, that he had offered to “pray with her” prior to her surgery if she wished. She was unsure whether or not this said something about his self confidence but declined the offer.

Spirituality

Spirituality has recently been defined as:

...an experiential process whose features include quest for meaning and purpose, a sense that being human is more than material existence ...connectedness with others, nature or the divine ... and values (Peach, 2003).

This definition invites a consideration of the relationship between spirituality and religion. A religion organizes the collective experiences of a group of people into a system of beliefs and practices; religiosity refers to the degree of participation in, or adherence to, the belief and practices of a religion (Mueller, Plevac and Rumman, 2001). Smith (2000) argues that only religiously oriented accounts of spir-

ituality are viable, while Zinnbauer *et al* (1999) insist on the usefulness of the integration rather than the polarization of religious and secular constructs of spirituality.

Favazza (2001) reminds us that contemporary secular spirituality is big business, with pyramid power, channeling, quartz crystals, personal trainers and the rest helping us to:

... prepare for a spiritual quest to facilitate [our] participation in the dance of living ...[or]... to be set free by the truth that flows from an intimate relationship with the universe ...[or]... to accept the higher consciousness that comes with egolessness.

He also notes that:

... Easterners are turning to Christianity while Westerners are flirting with Buddhism. Muslims are caught up with politics and nobody understands Hinduism.

Religiosity

Contemporarily, the fastest growing religious movement on a global scale is a form of neo-Pentecostal Christianity which originated in the USA (Hunt, 2000), and despite their diversity of practice and theology, all churches of the Pentecostal movement hold that a ‘born again’ believer’s physical illness can be overcome by faith.

During the 20th Century extensive secularization occurred in western nations, the US being the only sig-



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nificant exception. However, within the US, the strongly theistic, anti-evolution South and Midwest have markedly worse homicide, mortality, STD, youth pregnancy, marital and related social problems than in the Northeast where secularization and acceptance of evolution approach European norms (Paul, 2005). This association holds internationally among western (and mostly Christian) countries and does not seem to be correlated with wealth.

Emerging trends in medical practice

At the beginning of recorded history, it was believed that healing could only be effected by the appeasement of wrathful gods, a process conducted by shamans (Cassell, 1991). Although always in the wings since then, the topic of spirituality and medicine has, in recent years, moved closer to centre stage in the USA. More than half of all US medical schools and many hospitals have introduced courses on spirituality (Berlinger, 2004) and Harvard Medical School now sponsors conferences on "spirituality and healing" (McBride, 1999). Berlinger (2004) cautions that there is no single definition of spirituality in use across these initiatives, but that the published literature on the subject leaves no doubt that it is grounded in established religion. A survey of family physicians at a 1996 meeting of the American Academy of Family Physicians revealed that 99% believed that religious beliefs can heal and that 75% believed that others' prayers can promote healing (Larimore, 2001). Little wonder, then, that there is a growing body of writing suggesting that the provision of "spiritual care" should not be the exclusive domain of "pastoral professionals" (Larimore, 2001) and should be an adjunctive routine medical treatment (Koenig, 2001). Astrow *et al* (2001) have even suggested that to provide a better service to their patients, doctors should "cultivate and deepen their own spiritual lives".

Readers will have noticed the article in the Winter 2006 issue of *the Skeptic* (26:2) where Surenda Verma reports on the findings of a large

randomized placebo controlled trial of the effects of distant intercessory prayer on the outcome of patients undergoing heart surgery, and will not have been surprised by the outcome.

Dagi, a neurosurgeon in the US, writes (1995) that "... *almost daily I see patients asking nurses and visitors to pray with them*" and Post (2000) records that a recent US poll reported that 48% of patients wanted their physician to pray with them and that 64% of Americans believed that physicians should do so if asked. Many US physicians initiate prayer with their patients (Olive, 1995), a matter of ethical concern for both Dagi and Post. Comparable data is not available for the Australian situation but would be expected to be quite different. However, my introductory experience may be an indication of change.

This recent overt movement of spirituality into US medical practice is probably driven in part by the support for fundamental Christianity provided by the Bush administration, but it also reflects the long standing religiosity of the US community. There has been little change in indices of religious belief and practice in the USA as revealed by Gallup polls since the mid-1930s, with around 95% of people believing in God, 85% saying that religion is important in their life and around half the population praying daily and attending a church weekly. This is not seen in Australia where there is a 60% belief in God with only a 25% church attendance monthly, with census data indicating a decline in the religiosity of the community (Peach, 2003).

Many recent studies have reported mostly, but not always, positive relationships between physical health, mental health and indices of religiosity. Most have been based on cross sectional questionnaires without adequate control of moderating or confounding variables (Thoreson, 1999). Salsman *et al* (2005) have been able to demonstrate that religiosity and spirituality exert their positive effects on adjustment through factors such as optimism and social support. A healthy skepticism seems appropri-

ate, given the need to clarify concepts of spirituality, to develop reliable methods of assessment and properly designed studies.

Klitzman and Daya (2005) have suggested that physicians' awareness of their patients' spirituality could strengthen doctor-patient relationships and communication, and patient satisfaction.

While the evidence of a causal relationship between spirituality and better health outcomes is suggestive although not conclusive, the evidence for doctors discussing spirituality with their patients being beneficial is largely indirect or anecdotal (Peach, 2003). We need to challenge the assertion of Larimore (2002) that:

...clinicians and health care systems should not, without compelling data to the contrary, deprive their patients of the spiritual support and comfort on which their hope, health, and well-being may hinge.

and those of Koenig (2001):

...bringing spirituality back into medicine may be what we all need.

The case for the maintenance of secularism in medical practice

There is no doubt that an acknowledgement and an understanding of patients' religious and secular values and beliefs is necessary for a complete understanding of their illnesses and of their selection of and responses to treatment. This does not *per se* represent an argument for medical intervention. "*To move from awareness to intervention in this area seems premature at best*" says Hamilton (2001), a view shared by Vandecreek (2001).

Sloan (2001) raises four ethical concerns in respect of medical practitioners' involvement in the spiritual which, he argues, would hold even if such interventions were to be shown to work. Many factors influence health, among them marital status, socioeconomic status and education, but we would not suggest to patients that they should marry for the sake of their health. Recommending religion to a patient may be coercive, considering the asymmetric power balance in doc-

Is spirituality the new CAM?

tor-patient relationships; by linking religious activity to better health outcomes the converse, that poor outcomes are associated with insufficient faith is implied, reinforcing the pre-modern notion that illness is a punishment for moral failure; and finally, that by probing the religious interests of patients and distinguishing those with faith from others, the scene is set for a variety of forms of discrimination.

The necessity of physicians disclosing their own religious affiliations prior to exploring those of their patients has been stressed by Daaleman (2001).

Also of major concern are issues related to professional boundaries and competency (Post, Puchalski and Larson, 2000), and situations characterized by conflict between religious belief and medical recommendations "...when patients choose faith over medicine..." (Farr et al, 2005).

Conclusions

Doctors are seeing a rejection of at least some aspects of modernism in their patients' use of 'complementary and alternative' therapies and in a lessening of trust in medical practice generally. In a comparable fashion, doctors are coming to accept the complexities and uncertainties of medical science and medical practice. This does not justify a return to pre-modern beliefs or practices: to a culture of shamanism. Post-modern interpretations of naturalism and pragmatism and the continuing development of an empathic secular ethic of medical practice are the rational alternatives.

Feelings of empowerment, meaningfulness in work, satisfaction in creativity or idealism do not constitute, in themselves, any form of spirituality within the usual meanings of that word. Enlightenment, attitudes and insights are states of mind and can be examined using naturalist methods; there is simply no need to postulate non naturalist processes. No form of spirituality, secular or religious, is necessary for a consideration of values or for the conduct of effective and ethical medical practice. True, there is much which modern medicine has yet to learn,

but the words of Mackenzie from 1897 remain true:

The religious imagination ... in its effort after a final explanation of the mysteries of things, outruns science. It cannot wait for the plodding processes of reasoning and verification. But these come afterwards; and when they come, they generally find that the kernel of religious truth has been hastily wrapped in a husk of superstition.

The ethical probity of health care professionals encouraging demonstrations of spirituality or religiosity within treatment contexts is highly problematic. The relevant ethical considerations, as outlined above, go beyond those usually associated with the institutional use of other forms of CAM.

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Skepticism in Music

A Skeptic pays homage to Euterpe

Further to Dave Molloy's letter (25 – 4), which was further to Michael Lucht's article (25 – 2), I have examined some of the evidence for skepticism in music. (Basically, I scanned my own collection and my memory!)

Despite Dave's excellent reference to the incomparable Frank Zappa (whom Grace Slick from Jefferson Airplane once poignantly described as "the most intelligent asshole I've ever met"), I don't think there is actually much music with a skeptical attitude. (Maybe this is a reflection of the nature of my own record/cassette/CD collection). I found a small amount of skepticism, but if contemporary music is skeptical it's more likely to be about politics and maybe religion than the 'woo-woo people'. (Jazz doesn't have much in the way of lyrics, and opera is all about grandiosity and love and death and tragedy and nonsense.*)

Anyway, perhaps I might be permitted a few broad generalisations. Rock and pop always had a heart and soul but (until Dylan came along and gave music an intellect) most of the songs were about babies eg, *Baby I Love You*, *Be My Baby*, *Baby I'm A Want You*, *See My Baby Jive*, *Sweet Baby James*, *Baby You Can Drive My Car* ... Etcetera, etcetera, etcetera... (to quote Yul Brynner's most famous line from *The King And I*). The Vibrators took it to the limit with a song just called *Baby, Baby, Baby* and there was a band simply called The Babies. And sometimes they did abominable things to babies... "*Down by the river / I shot my baby*" wailed Neil Young. But, let's face it, most of the time the words don't matter or just "get in the way" (according to The Mamas and The Papas). Generally listeners don't much care. There's

even a huge website dedicated to 'misheard' lyrics — the most famous example being in "Purple Haze" by Hendrix where people commonly mistake "*Scuse me, while I kiss the sky*" for "*Scuse me, while I kiss this guy*". But when they're not singing about babies and teenage heartbreak, drugs and, yes, sex (the aforementioned Frank Zappa once said something like "...rock n' roll has done more for oral sex than anything else in the 20th Century, and vice-versa"), rock n' rollers, especially the hippies, are usually more 'alternative' and gullible than skeptical. For example:

A band actually exists called Antiskeptic (yes, it's even spelt with a "k".) They are a 3-piece Melbourne alternative punk type outfit, but the lyrics I found on their website aren't of much skeptical interest one way or another. I emailed them with a question about the aetiology of the name but received no reply.

Cream – *Born Under a Bad Sign* — although Jack Bruce from Cream said, when talking about their lyricist, Pete Brown, "that his words didn't have to mean anything, they just had to sound good when you sang them...and usually they did! (This has been common practice...consider the sublime, meaningless, grandiose pomposity of *Whiter Shade of Pale* ...)

The Fifth Dimension — *The Age of Aquarius*

Jimi Hendrix — *Voodoo Chile*

Steppenwolf — *Magic Carpet Ride*

Santana — *Supernatural*

Donovan — *Season of the Witch*

Van Morrison — *Into the Mystic*



Terry Kelly, an ex English teacher, is now a Social Worker in a neurology unit working with people with head injuries. He is a member of the Victorian committee and has played cricket with Merv Hughes.

Malcolm McLaren (Sex Pistols' manager) in *Living on the Road in Soweto*, says that "All Xhosa Zulu Sangoma Witchdoctor/ Say Shangaans the Boogie Beater", meaning, I think, that the Shangaan tribe are the best at defeating the 'Boogie Man'.

Robert Johnson — *Crossroads*, which, legend has it, is where he sold his soul to the Devil in return for the ability to produce great blues music.

Jonathan Richman and The Modern Lovers — *UFO Man* and the list (like 'the road') goes on forever...

They don't mind a bit of religion either:

Eric Clapton — *Presence of the Lord*

Blind Faith — *Blind Faith*

Ry Cooder — *Jesus on the Mainline* ("...you can call him up and tell him what you want")

Jefferson Starship — *Miracles*

Norman Greenbaum — *Spirit in the Sky*

Jimmy Little — ("...You can talk to Jesus on his...") *Royal Telephone*

Santana — *Soul Sacrifice*

The Doobie Brothers — *Jesus Is Just Alright*.

Recently Kelly Stolz in *Ever Thought of Coming Back* says "*Jesus Christ what have you been doing all this time?/... if you ever thought of coming back well know is the time*". I'm not sure whether he is being 'faithful' or cynical, though.

But rockers do occasionally stick the boots into religion. One of the best is *Tomorrow Wendy* by Andy Prieboy:

I told the priest / don't count on any second coming / God got his ass kicked the first time he came down here slumming / He had the balls to come, the gall to die and then forgive us / No I don't wonder why, I wonder what he thought it could get us / Hey, hey good try / Tomorrow Wendy's going to die / But God says jump, so I set the time / 'cause if he ever saw her it was through these eyes of mine /

And if he ever suffered it was me who did his crying...

Apparently this is a song about a friend dying of AIDS.

Other religio-skeptical efforts include *Soft Parade* by The Doors where Jim Morrison screams in exhortation: "*You cannot petition the Lord with prayer*" and Jethro Tull's magnificent *Aqualung* where they suggested that man created God, not the other way around. Even ex-Wangaratta choir boy Nick Cave, who, I think, has ended up with that cursed drug-induced religion (as opposed to my Catholicism-induced atheism), says, in *Into My Arms*: "I don't believe in an interventionist God". Of course there is the Rolling Stones' *Sympathy for the Devil*, good old Black Sabbath, and more recently Faith No More. And John Lennon tried to imagine a world without religion in *Imagine*.

Songwriters seem to be more skeptical when it comes to politics and power and war. For example:

John Lennon — *A Working Class Hero* ("... is something to be")

Peter Tosh and Bob Marley — *Get Up Stand Up, Stand Up For Your Rights*

Bob Dylan — *The Times They Are a Changing; Blowin' in the Wind*

Billy Bragg — *There is Power in a Union*

Donovan — *Universal Soldier*

Barry McGuire's gloomy and imitative (of Dylan) — *Eve of Destruction*

Hendrix's mesmerizing — *Machine Gun*

Neil Young — *Ohio*.

Britain even has a Rock against Racism movement.

In Dylan's powerful *Masters of War* he says of the warmonger: "*And I'll stand o'er your grave / Till I'm sure that you're dead*". The Who were a wee bit skeptical about political, cultural and organisational change in *Won't Get Fooled Again*, inviting us to "*...meet the new boss / same as the old boss*".

More recently Green Day produced *American Idiot* and some of the most skeptical/cynical 'bullshit aware' art-

ists are the rappers and hip-hoppers who supposedly don't have much vested interest in the status quo (except when the cheques start rolling in). Radiohead's CD, *Hail to the Thief*, refers to the manner in which they perceive George W. Bush to have managed to win his first election.

And now the very modern artist, Peaches, has combined the aforementioned sex with politics with an album called *Impeach My Bush*, in which she stridently exclaims: "*I'd rather f**k who I want than kill who I'm told*".

My favourites, though, are the blessedly disrespectful Sex Pistols, possibly more cynical than skeptical, but just so bloody direct in recommending *Anarchy in the UK*, bombarding our delicate post-hippy sensibilities with "*I am an antichrist*" (surely the most powerful and shocking opening line in rock history). Their aspiration? "*I wanna be an anarchist*" And their solution? "*Get pissed, destroy!*" Then they really get stuck in with "*God save the Queen / The fascist regime... God save the Queen / She ain't no human being*" with it's gloriously turbulent "*...no future, no future...*" finale.

I did find a tiny bit of skepticism and 'science', although some of it may be accidental or incidental. There is actually an Australian band called Sally Dastey and the Sweet Sceptics (sic) although I'm not sure how 'skeptical' they really are in 'our' sense. Placebo comes from Britain and The Giants of Science are Australian.

And then there were The Scientists, a Melbourne 80s phenomenon. Shock Records website describes them thus: "*...one of the world's greatest garage rock bands... Embodying the very essence of rock n roll with their snarling attitude and dirty blasts of stripped back garage punk blues noise, their potent buzz saw guitars made ears bleed and they heaped more discordance, distortion and disturbance on to two chords than anyone dared to up until that point in time.*" (I wish I could write like that.)

Melbourne's fabulous 1960/70s hippie band Tamam Shud (which I think might be Swedish for 'the end') did an album called *Evolution*. Stevie

Wonder had a huge hit with *Superstition* (“If you believe in things you don’t understand then you’ll suffer / *Superstition ain’t the way*”). Jimi Hendrix possibly ventured into astronomy with *3rd Stone from the Sun*. Maybe Yes messed with physics in *Total Mass Retain* from the *Close to the Edge* album and the B52’s got into science fiction on *Planet Claire* (“She drove a Plymouth satellite / *Faster than the speed of light*”).

A band with a scientific sounding name is The Magnetic Fields but their most notable (and brilliant) effort is a Triple CD set called *69 Love Songs*. Apparently the songwriter set out to write 100 Love Songs but pulled out early and settled on 69.

My favourite skeptical lyrics come from Radiohead with “Just ‘cause you feel it / *Doesn’t mean it’s there*” on *OK Computer*, once described as the first ‘modern’ album. This is balanced by a song called *Karma Police* which might be a bit tongue in cheek but goes: “*Karma police arrest this man, he talks in maths / He buzzes like a fridge, he’s like a detuned radio...*”.

Joe Walsh (before joining The Eagles) possibly summed up the skeptics’ dilemma in dealing with creationists, televangelists, psychics and their ilk with *You Can’t Argue with a Sick Mind*. The Aztecs did *The Hoax is Over* and The Flaming Lips have recently released an album called *At War with the Mystics*, though I think the title is more skeptical than the content. J.J.Cale eschewed any notions of a flaky alternative mind/body relationship type attitude in relation to illness when he showed a reassuring confidence in conventional medicine by singing, in *Call The Doctor*, “*Somebody call for the Doctor, I think I’m sick / Ain’t had my medicine in over a week / My mind’s fine but my body feels weak / Call the Doctor, I think I’m sick.*”

A very long bow could be drawn by arguing that Dylan was being prophetic with “*the answer my friend is Blowin’ in the Wind*” anticipating the alternative energy debate and *A Hard Rain’s a Gonna Fall* and *Hurricane* eerily predicting some of the consequences (in many people’s opinion) of global warming (New Orleans?)

There’s even a bit of skepticism about the faith placed in science. Gram Parsons and Chris Hillman in *Sin City* wrote:

This old earthquake’s gonna leave me in the poor house/It seems like this whole town’s insane/On the thirty-first floor a gold plated door/ Won’t keep out the Lord’s burning rain/The scientists say/It will all wash away/ But we don’t believe any more.

Australian singer/songwriter Shane Nicholson has just produced an album called *Faith And Science* which expresses reservations about faith AND science:

You were colour and sound / Numbers and words in the rain / All that faith won’t heal / And science won’t explain...

But I’ll finish with those legendary far out ‘psychedelic warlords’, Hawkwind, (some middle-aged clapped out old hippie freak survivors among our readership will know who I’m talking about!) who, in 1971, on the cover of *In Search of Space* warned: “*Technicians of Spaceship Earth / This is your Captain speaking / Your Captain is dead*”. And in another scathing satirical attack on creationism in *Master of the Universe* they sang:

“I am the centre of this Universe / The wind of time is blowing through me / And it’s all moving relative to me / It’s all a figment of my mind / In a world that I’ve designed / I’m charged with cosmic energy / Has the world gone mad or is it me? / I am the creator of this universe / ...If you call this living I must be blind”. (Brock/Turner 1970)

What a great image ... The Creator going mad!

Footnote:

Just in case anyone was wondering, Blue Oyster Cult were not into anything sinister, they just couldn’t think of a name for themselves until they came up with an anagram of Cully Stout Beer, which is what they were getting pissed on at the time.

Editor’s Note

* This is a very brave claim indeed in a submission to a journal, whose editor has a music collection comprising around 45% each of jazz and opera. So let us consider a work that encompasses both genres, written by one of the preeminent composers of the 20th Century, and which contains one of the most skeptical lyrics of all time — George Gershwin’s *Porgy and Bess*.

It Ain’t Necessarily So

*It ain’t necessarily so
It ain’t necessarily so
De things dat yo’ liable to read in de Bible
It ain’t necessarily so*

*Li’l David was small but oh my
Li’l David was small but oh my
He fought big Goliath who lay down and dieth
Li’l David was small but oh my*

*Oh Jonah he lived in de whale
Oh Jonah he lived in de whale
For he made his home in dat fish’s abdomen
Oh Jonah he lived in de whale*

*Li’l Moses was found in a stream
Li’l Moses was found in a stream
He floated on water ‘til ole Pharaoh’s daughter
She fished him she says from that stream*

*It ain’t necessarily so
It ain’t necessarily so
Dey tell all you chillun de debble’s a villain
But ‘taint necessarily so*

*To get into Hebben don’ snap for a sebben
Live clean, don’ have no fault
Oh I takes dat gospel whenever it’s pos’ble
But wid a grain of salt*

*Methus’lah lived nine hundred years
Methus’lah lived nine hundred years
But who calls dat livin’ when no gal’ll give in
To no man what’s nine hundred years*

*I’m preachin’ dis sermon to show
It ain’t nessa, ain’t nessa
Ain’t nessa, ain’t nessa
It ain’t necessarily so*



Would You Believe it?

Conspiracies do happen, but evidence is required

Is reality too mundane for some?

I was having dinner with some friends not so long ago, when the subject of conspiracies came up. “If they can kill their own President”, I was told, “then they are capable of anything”. Who they were depended on who you were listening to, the CIA, the secret service, the guy with the umbrella, some mysterious figure on the grassy knoll or perhaps Lyndon B Johnson himself; anyone in fact, other than the man to whom all the evidence pointed, Lee Harvey Oswald. As the sole skeptic at the table I was left to defend the possibility that such a conspiracy would be almost impossible to keep quiet. They couldn’t even suppress a botched break in at the Watergate hotel I argued, but my reasoning was dismissed. “Conspiracies do happen you know”, I was told.

It’s not always easy to be skeptical about conspiracies for that single reason. They exist. When Victor Yushchenko was admitted to hospital in September of 2004 it became apparent to the Austrian doctors treating him that he was suffering from something other than the initial diagnosis of acute pancreatitis. Over the next few days it was revealed that he had,, become ill after dining with he chairman of the Ukrainian Security Service (SBU), Ihor Smeshko, and his deputy, Volodymyr Satsiuk. Soon after, allegations were made that he had been poisoned by dioxins. The story reads like an Agatha Christie novel — a popular political figure, on the eve of a general election, poisoned by members of the Ukrainian secret service in a botched job that left him alive.

Does it matter that two professional spies would probably not want to be publicly identified as the last people to have eaten with a poisoned man? Dr Stephen Mandy, professor of dermatology at the University of Miami in the US, told the BBC that Yushchenko’s facial disfigurements may have been be rosacea, an inflammatory skin condition which can leave the face swollen and lumpy. A British poison expert who remained anonymous also dismissed the poisoning theory “You would need huge amounts of dioxins to poison someone, I just don’t believe it.” And neither did I. But three months after Yushchenko was examined by the medical team at the Rudolfinerhaus Hospital in Vienna, a US clinic that had been sent a blood sample confirmed that he had indeed been poisoned by dioxins. Conspiracies, it would seem, do happen.

And of course we know this; we know that Kennedy conspired to remove his missiles in Turkey in return for Khrushchev’s removal of his from Cuba. We know that political figures from Alexander the Great to Yushchenko have been laid low by poisons. We know that assassinations occur, that governments collude to deceive the public, that car manufacturers could make more fuel efficient cars if they really wanted to. We know these things, so why be skeptical about conspiracy theories?

The word theory is most often associated with science, although it has other applications. Take Alexander the Great, was he poisoned? The answer is that we don’t know, and the reality is that we will never know.



Ian Jackson is undergoing a PhD in Journalism at Murdoch Uni and thus has very little social life.

Historians, having read the accounts of those who witnessed his slow death, have concluded that he may well have been poisoned. Like Yushchenko there was motive, the manner of his death was well documented and was consistent with what we might expect from some of the poisons that were in use around that time. Since, however, his death occurred in 332 BC, we are unlikely to ever recover his remains; consequently no definitive answer will be forthcoming. The point is, that historians are perfectly within their rights to theorize on the circumstances behind Alexander's demise, as long as the caveat remains that the evidence in support of the hypothesis remains incomplete.

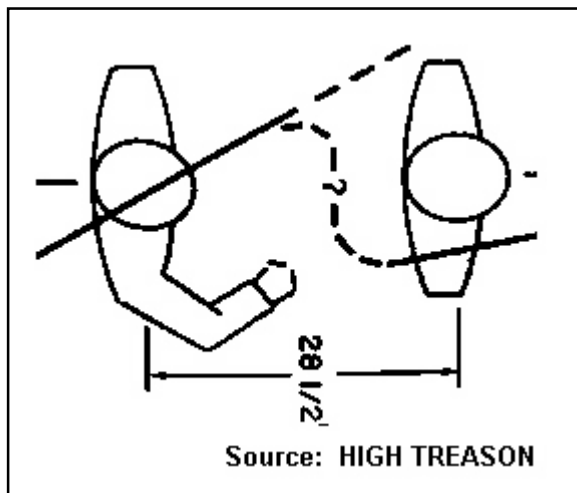
Science does not retain such a luxury — any scientific theory must begin with a disprovable hypothesis, something that intelligent design 'theorists' have spectacularly failed to produce. Scientists must also adhere to the rigorous demands of subjecting observed phenomena to experimentation, and produce repeatable results backed by empirical evidence. Conspiracy theorists are unable to bridge the gap between what is acceptable for an historian to postulate and what is acceptable for a scientist to postulate.

Was Kennedy assassinated? Of course. Was there a conspiracy? We don't know. We can work only within the restrictive boundaries of assumption tempered by logic and reason. For a conspiracy to have occurred, Oswald would have had to confide in just one other person, a not unreasonable proposition. What would be unreasonable would be to suggest that that other person was somehow directly involved in the shooting. Most people believe that there was a conspiracy; they have been told about the magic bullet, that some eye witnesses heard a fourth shot and that even three shots from a bolt action rifle would have been impossible in the allotted five or so seconds that the assassination occurred*.

The problem is that unlike the circumstances surrounding Alexan-

der's death, all of these things can be tested more or less along the scientific principles I mentioned earlier. Can a bolt action rifle be fired three times in less than five seconds? Yes it can, it's been done, several times. Can a bullet enter a human being and exit it unscathed? Again yes, tests on animals have conclusively proved that it is possible although at any rate, the photograph of the bullet used in the Warren commission showed only one side of the 'pristine' bullet, due to the uncomfortable truth that the other side was mangled. Can a bullet twist in the air like an acrobat and wind up hitting Governor John Connally in the wrist? No it can't.

The magic bullet theory however



requires us to believe that Connally was sitting directly in front and at the same height as Kennedy. He wasn't, Kennedy's seat was raised up and Connally was seated to the left of him, more or less in the path of the bullet (See figure 1)

As for the more esoteric question as to whether the secret service failed to act on intelligence, whether the incompetent decision to allow an open top procession alludes to sinister motives, and whether Lyndon B Johnson was fully aware of an assassination plot or even was involved in it, we have no definitive answer. What we can say is that no evidence that this

might have been the case, not one scrap of it exists. No deathbed confession, no whistle blower, no coded document signed by the vice president, no photograph of Lee Harvey Oswald talking to Vice president Johnson in a smoky room. Nothing. Conspiracy theorists might laugh and tell us that of course no such things exist, that's the nature of a cover up.

What we do know is what I tried to tell the people at the dinner party, that the government was unable to keep the bungled break in at the Watergate hotel quiet, but faking the moon landing, was a piece of cake right down to convincing special effects gurus to build them a few realistic looking but nonfunctional Saturn 5 rockets. They were somehow kept things quiet through the successive interviews with Neil Armstrong, a venerable and decorated officer, who suffered no apparent moral crisis whilst riding through the heroic ticker tape parade after being released from quarantine. And, we are led to believe, not one of the thousands of NASA personal who helped make the dream a reality, ever decided to break ranks and tell the world where the secret sound stage upon which Neil Armstrong pretended to bounce was located.

"Do you really believe that Lee Harvey Oswald killed the president on his own?" I was asked shortly before excusing myself to go to the bathroom.

"Yes I do," I told them. Until such time as a compelling piece of evidence, as happened with Victor Yushchenko emerges there can really be no doubt. As I returned from my sojourn to the bathroom I experienced one of those moments of paranoia, had they been discussing my 'naivety' in my absence? I sat down to a short lull in the conversation as people tried to think of something else to discuss. "See", I thought to myself, "conspiracies *do* happen".

*17 of the 114 testimonies claim to have heard a fourth shot whilst the other 97 heard three



Frightened Freethinkers:

A Case of Attempted Censorship

A sad case of trepidity among Freethinkers



Nigel Sinnott is the author of *Place-Names of the Alexandra, Lake Eildon and Big River Area of Victoria* (2003). He has been a member of the *Australian Skeptics* since the early 1980s and has been bearded since 1965.

There are often emotional reasons why a disbeliever in religion becomes an outspoken atheist and a noisy, rusted-on rationalist rather than a quiet agnostic. There were in my case, but this is not the place to discuss them. Suffice it to say that since 1963 I have been actively involved in humanist, rationalist and secular organisations in England and, later, Australia. But in the 1990s something happened that made me consider, for a short while, severing all my links with organised freethought.

In 1995 the Sinnotts, who were living in Alexandra, rural Victoria, had a visit from Ron Marke, who had been secretary of the Rationalist Association of New South Wales and editor for 23 years of its journal, the *Rationalist News*.

While he was with us, Ron bought at the local newsagent's a copy of Sarah Hamilton-Byrne's book, *Unseen Unheard Unknown* (Penguin Australia, 1995), an exposé of Anne Hamilton-Byrne's cult, The Family. The book interested Ron because many of the events described had taken place near Alexandra at Kai Lama, The Family's property at Taylor's Bay on Lake Eildon.

I knew of the book's existence, but had deferred reading it as I was sure the contents would be very distressing. I had read about the cruel and

scandalous activities of The Family in a number of reports and features in *The Age* (Melbourne), mainly in the late 1980s, and I had sent newspaper cuttings on the subject to the (then) editor of *The Freethinker*, Bill McIlroy, in England.

Ron Marke returned to Sydney and bought another copy of Sarah Hamilton-Byrne's book. He posted it to me as a gift, and I received it on 19 October 1995. I realised the time had come for me to "bite the bullet" and read the book. I did so, and found it moving and most impressive.

The book was a damning indictment of the depths of cruelty to which gullibility, authoritarianism and blind loyalty will lead. As I knew the area with which much of it was concerned, I decided I would try to contribute my mite to making the book better known. I wrote an article-length review, entitled "The Cruel Cult of Anne Hamilton-Byrne".

The Freethinker accepts, but ...

As the freethought press in Australia might already have reviews of this book in hand, I submitted my typescript to Peter Brearey, who had succeeded Bill McIlroy as editor of *The Freethinker*. In response, I received a letter (dated 8 November)

thanking me for my “excellent piece”. Brearey added:

Kindly check, amend and return the enclosed proof to Wakefield [Yorkshire] as quickly as you can; I would like to use the article in the December issue of The Freethinker. Thinking as a former Editor, are you content about the legal angles? Have there been any injunctions, threats of legal action or whatever against the author or publisher, etc., etc.? . . . Anyway, if you're happy about such things, I'm happy.

I was not concerned about libel because I knew that the serious allegations in the book had been given in evidence in the courts, and had been published in *Age* articles. However, the question was a reasonable one.

Brearey's letter and proofs arrived on the morning of 17 November 1995. I rang Penguin Books Australia and was assured that the book had not been found libellous by a court and that there was no legal action against it in process. (The Family's leaders were almost certainly keeping their heads well down!) I checked the proofs and returned them in the afternoon post with a letter saying I had phoned the publishers and was happy about the legal angles.

My review-article did not appear in the December 1995 *Freethinker* or, to my puzzlement, in any subsequent issue. I wrote to Brearey on several occasions (for instance 8 February and 30 May 1996) asking if my text was still going to be published. The letters were ignored, and I never heard from Brearey again.

I assumed that Brearey lacked the manners and courage to tell me he was not, after all, going to use my copy. Later I informed Keith Porteous Wood, general secretary (now executive director) of the National Secular Society and also secretary of G. W. Foote & Company, publishers of *The Freethinker*, about the matter in a letter (dated 22 June 1997), and added:

When I was Freethinker editor, I would never have treated someone in such a shabby way. Any contributor

of an accepted article who asked me why it had not yet appeared got a return-of-post reply.

In December 2005 I received a letter from Barbara Smoker, a former president of the NSS and regular contributor to *The Freethinker* who had known the late Peter Brearey. She agreed that I should have been notified of any decision not to publish my review, “but at that date I think Peter was already terminally ill” and “I well remember how gaunt and sallow he was looking in his last year.” In a later letter Barbara suggested that the Board of G. W. Foote & Co. was probably dilatory in delegating Brearey's responsibilities.

It is just possible, therefore, that someone else took over Peter Brearey's duties, and decided to “kill” the review and not answer any correspondence about this. On the other hand, Brearey accepted the review two and a half years before his death on 9 May 1998.

The Rationalist News response

When I was satisfied that my review-article was not, in fact, going to appear in *The Freethinker*, I informed Ron Marke and authorised him, probably in late 1996, to offer a copy of the typescript to his successor as editor of the *Rationalist News*, Peter Hanna.

In due course, Hanna asked me if there were any legal problems with the book. I again rang Penguin Australia, then wrote back saying all was well. I gave Hanna the Melbourne telephone number of the publishers in case he wanted to check for himself.

Hanna still dithered and prevaricated. After discussing the book and my review with Ron Marke, Hanna decided not to publish. The man who described himself on his rubber stamps as “PETER TOFEAH HANNA / 666 / ANTICHRIST” did not have the courage to publish a favourable review of an indictment of a child-abusing religious cult. (Hanna told me Ron Marke had called him “gutless”!)

Peter Hanna wrote to me (1 Janu-

ary 1997) about his decision, saying that:

As editor I don't think members want me to expose the Assoc[iation] or its committee to litigation, regardless of being remote — unless over a critically important issue. My position is that I do the job as a favor for the R.A., not to have myself in a position to be exposed to possible litigation.

I replied (30 January 1997) as follows:

. . . Sarah Hamilton-Byrne's book has been on sale for some time, and when I last inquired (for you!) no legal action was in progress against it. . . . If . . . you were concerned about possible litigation, you should have checked with Penguin Australia and, if necessary, asked to talk to the publishers' legal department or solicitors. . . .

The only plausible grounds for not reviewing or publicising Sarah Hamilton-Byrne's book would, in my opinion, be:

- *if legal action was sub judice;*
- *if action had finished, and the author or publishers or both had been found guilty of libel; or —*
- *if you had serious grounds for doubting the allegations in the book.*

Unseen Unheard Unknown strikes me as a bravely written exposé by a much-abused and painfully truthful young woman. Its allegations of wholesale cruelty by an authoritarian religious outfit are exactly the sorts of things rationalist publications should be highlighting — the more often the better.

Sarah Hamilton-Byrne's book, and Kate Davies' When Innocence Trembles, are exactly the sort of publications the freethought movement should be publicising and selling. . . .*

My membership of the Rationalist Association of NSW was due for renewal at the end of December. I am not renewing. If I ever rejoin the Association it will be only when I am satisfied that you are no longer in a position of influence in it.

Frightened Freethinkers

The Humanist publishes

Once Hanna had made up his mind, Ron Marke suggested I offer the typescript to James Gerrand, editor of the *Australian Humanist* (published by the Council of Australian Humanist Societies). I knew James Gerrand rather well, as we were both members of the Humanist Society of Victoria, so I gladly complied.

A few weeks later Ron Marke had the satisfaction of telling Peter Hanna that my review-article had been accepted and was about to be published in the May 1997 *Australian Humanist*. Sydney's self-proclaimed "666 Antichrist" was not too pleased about this: he had apparently "crossed swords" with Gerrand on another matter!

However, in addition to holding various positions in the Rationalist Association of NSW, Hanna was also a vice-president of the Humanist Society of NSW. So he then uttered dire warnings to the Humanist Society's committee about the risk of libel action, and demanded that distribution to the Society's members of the May *Australian Humanist* be stopped.

The *Australian Humanist* was, and still is, edited and published in Melbourne. Copies are sent to Sydney in bulk, and are then distributed to members of the Humanist Society of New South Wales with the Society's state journal or newsletter, *Viewpoints*. (Rather similar arrangements apply in Queensland and Western Australia.)

In response to constant pressure from Hanna, the committee of the Humanist Society of NSW decided to delay distribution of the May *Australian Humanist* until an AGM in August. Ron Marke regarded this as a disgraceful form of censorship, as the issue had been distributed in other states, and he decided to do something about it. He wrote to Humanist Society president, Molly Campbell, and demanded his member's copy of the May *Australian Humanist*: he received one. Ron also asked James Gerrand for an extra supply of the magazine. On receipt,

Ron posted about twelve copies of the May issue to various people in New South Wales with a covering circular letter:

12 June 1997

Dear Humanist Society Member,

You may or may not be aware that your Committee of the Humanist Society of NSW has censored the attached latest edition of the *Australian Humanist* because James Gerrand, editor, has published Nigel Sinnott's well-written review article on "The cruel cult of Anne Hamilton-Byrne" . . . I understand from Molly Campbell, president of the Humanist Society of NSW that the Committee decided not to send its members this particular edition of the *Australian Humanist* on the grounds that Nigel's article is libellous and that something was wrong with the present format of the journal. . . .

I would like to know whether you think Nigel Sinnott's review article is libellous or not. I regard your Committee's action as censorship — presumably from paranoia. I understand that all other members of the state societies have received their copies without any interference from their committees. . . .

In my long working association in the freethought movement in New South Wales, both as an organiser, editor and printer, I have never seen such cowardly behaviour as this. . . .

James Gerrand decided to take action of his own. He got in touch with his bearded friend in Sydney, Barry Williams, editor of *the Skeptic*, of which I was also a reader. Barry Williams regarded the libel allegations as ludicrous, and offered to republish the review almost immediately. It appeared in the Winter (June) 1997 issue of *the Skeptic* (with the title "Anatomy of a Cruel Cult"), giving the review a much wider readership in Australia than I had originally expected.

Ron Marke's circular to members of the Humanist Society of NSW attracted a response from a lady member.

Nigel's article . . . makes many

claims about the punishment of children [by The Family] e.g. "The children were viciously punished." How does Nigel know this? Can he prove it?

Anne [Hamilton-Byrne] had "plastic surgery and liposuction". Can he prove this?

I . . . suspect that Nigel knows nothing except what he has read about it. I suspect the article is merely a badly written book review: that all the above claims should have been in quotes. If I were editor of AH, I would have asked Nigel to rewrite it properly.

I agree with Peter [Hanna] that sending out the article in our name would be very risky.

It would also be pointless, unless Nigel can substantiate all his claims. If the article turns out to be just a badly written book review we would have put ourselves in financial jeopardy to support someone's right to make unsubstantiated insults.

If it turns out that Nigel really has something important to contribute, that would be different — that would be freedom of speech. . . .

After receiving a copy of this letter from Ron, I wrote to the writer on 8 July saying, among other things:

Nearly all my knowledge of *The Family* comes from written information. I do, however, know the area around Taylor's Bay well: I have visited the area regularly since 1977, and have lived about half an hour's drive from Taylor's Bay since 1992. I have consulted one or two people in Alexandra and Eildon about the cult and its local profile.

My knowledge of *The Family* does not, however, come entirely from Sarah Hamilton-Byrne's book. *The Melbourne Age* reported the [police] raid on Kai Lama (1987) and there were various follow-up stories on it. The trials and sentencing of the "Aunties" were also reported in the same paper. I read as many of these reports as possible, and sent copies or cuttings to the Freethinker (London)

and, I suspect, other magazines. . . .

In my review-article I said that a disappointment the children had to bear (after rescue) was “being told that the authorities were unable to prosecute members of *The Family* for cruelty, as more than twelve months had elapsed from the last date of abuse”. It is quite clear that the Victoria Police believed Sarah and the children’s accounts of cruelty, and would have laid charges if they could. This loophole in the law has now been closed. . . .

No-one, not even in the seedier reaches of Sydney, has so far tried to tell me that Sarah Hamilton-Byrne is a liar or that her claims are grossly exaggerated. I regarded her book as brave and honest, and of particular interest to humanists, rationalists and freethinkers of all persuasions. My object was to publicise the book and encourage people to read it. If I had written a dismissive or scathing review of the book, then I could understand criticism from humanists. . . .

The Humanist Society of NSW had also had the benefit of some written advice. In a memorandum of 23 June 1997 Mr “Keith R. Rex JP” informed the president and committee that:

Mr Ron Marke . . . asks me if I think Nigel Sinnott’s article . . . is libellous. . . . It is indeed very libellous, and the HS could be sued for a vast amount of money for publishing it. . . .

While I take pains to write controversial material (since the non-controversial is boring), I am also at pains to avoid libel. Had I written a review of this book, I most certainly would not have written it the way Nigel has. Not only is it libellous, it is plagiaristic and in breach of copyright. Nigel writes as though this is all his personal experience and barely mentions the book in question and does so only scathingly.

When I write a review, I am careful to first give an account of the book and to keep my personal views of the quality of the book and my personal

opinion of the subject matter, all separately identifiable. While I cannot be sure, I assume that Nigel is using the book as his primary source? But he does not make this clear and makes many apparently personal disparaging statements about the founder of the cult, which are clearly libellous.

Mr Marke also accuses the HS of cowardly behaviour and claims that the act of holding up the delivery of this AH is censorship. However, I do not regard this as censorship since the object [is] to protect the HS from terminal damages — not to deprive the readers of a view about a controversial subject. . . .

However, since we are faced with a critical legal problem I will give my views on consequences: As to what would happen if we were sued is simple. We would be wiped out — whether we won (most unlikely) or lost. But the real question is What is the likelihood of us being sued. That I would say is vanishingly remote. The libelled party has a lot more important considerations and is most unlikely to even learn of this very tiny publication. What would I think be a greater risk would be a breach of copyright action by the author of the book, which this is supposed to be a review of. However, from my knowledge of her personality, I think that also pretty unlikely. . . .

In due course I received a copy of this memorandum from Keith Rex himself, with a covering letter (8 July) assuring me that his opinions were “Nothing personal of course — just a matter of law”. (Rex did, however, take me to task for my low opinion — expressed, probably, in a letter — of Pauline Hanson and her One Nation Party.)

The Skeptic enters the fray

A few days later I received a letter from a half-amused, half-bemused Barry Williams, who commented:

. . . I must say I am astonished by the attitude of the NSW Humanists and Rationalists to your review. . . . Are they really basing their actions on

legal advice they got from Peter Hanna and Keith Rex? Who do they take financial advice from? Alan Bond? Christopher Skase? . . . To put it bluntly, this advice is patently absurd. (Or, to put it even more bluntly, bloody ridiculous.)

I have managed to edit the Skeptic for the past seven years without even a threatening lawyer’s letter, let alone a law suit, so I can hardly be called reckless. As well, I have known James Gerrand as a friend for a goodly number of years, and I must say he has never struck me as posing a threat to western civilisation as we know it. I think I have a pretty good instinct for what is legal and what is not (as I am sure James does), but I don’t rely on that entirely. My daughter, Pita, is a very competent commercial lawyer and I usually run anything borderline past her for comment — I didn’t even think of doing that with this item. . . .

As for Rex’s claim that there was the possibility of plagiarism being involved, I doubt if I have ever heard a more risible suggestion (though understandably so, considering the source). Copyright law specifically allows for reasonable quotation for the purpose of criticism, and your article certainly did not transgress that. Further, can you imagine the recipient of a positive review arguing that the amount of quotation used was unreasonably large? They would have to be certifiable. . . .

I hope the Humanists manage to sort out their internal problems, but rest assured, the Skeptics will only be taking legal advice from people who understand the law. Apart from anything else, I thought your article was both good and performed a useful service and an editor can ask for nothing more than that.

As far as I know, no legal action was ever taken against Sarah Hamilton-Byrne’s book. In July 2005, however, Dr Sarah Moore, as she was by then known, appeared in court for writing dozens of prescriptions of pethidine for herself. She had been suffering from bipolar dis-

order, post-traumatic stress disorder, depression, and pain “caused by an incision in her abdomen made as part of an initiation” into The Family. The presiding magistrate placed Dr Moore on a four-year good behaviour bond and imposed a community-based order of 250 hours of unpaid work. After the hearing Dr Moore referred to the effects of The Family on other children who had been in its clutches: “suicide and psychiatric illness and drug and alcohol problems”.

Unseen Unheard Unknown was, and is, well worth reading as a detailed description of the horrors inflicted on children by a brutal, morally stunted religious sect. Ron Marke and I still think that the book was well worth reviewing. Efforts to suppress the review led to me stopping my subscription to *The Free-thinker* until a new editor was appointed, and to Ron Marke's resignation from both the Rationalist Association of New South Wales (in which he had been continuously active for 26 years) and the Humanist Society of NSW. After 1997 the fortunes of the Rationalist Association of NSW declined to a level where, in 2000, the *Rationalist News*, ceased publication, and in 2003 a member, alarmed by the Association's financial state, called in the police; but no charges were laid. In October 2005 a general meeting decided to seek amalgamation with the Humanist Society of NSW. Only Peter Hanna, who was no longer active in the Association, objected. On 11 March 2006 the members voted for a merger to create the Humanist and Rationalist Association of NSW Inc.

**When Innocence Trembles* (1994), by Kate Davies, is an account of the large-scale maltreatment of children by the Christian Brothers in Western Australia.



Speakers

Australian Skeptics National Convention

Melbourne Museum 18th and 19th November 2006

Dr Stephen Basser (GP, commentator on medicine and alternative medicine). *Medicines, Money and the Media — a Dangerous Cocktail?*

Dr Martin Bridgstock (Griffith University Academic, author) *Where is the truth most needed? Where can skepticism do the most good?*

Leigh Dayton (Science writer, *The Australian*) *A Skeptics Guide to the Newsroom.*

Dr Kevin Hennessy (CSIRO Atmospheric Research.) *Climate Change Sceptics.*

Prof David Henry (Dept of Clinical Pharmacology, University of Newcastle; Founder Media Doctor site). *The Media Doctor web site.*

Lynne Kelly (Author of *A Skeptics Guide to the Paranormal*, public speaker) *The Skeptical Science Teacher.*

Dr John Long, (Palaeontologist, Scientific Director at Melbourne Museum) Dr Long will present a public lecture on Sunday afternoon. *Are there Gaps in the Fossil Record?*

Stephen Mayne (Crikey.com.au founde/contributor) *The Media in Australia.*

Dr Rob Morrison (Flinders University, Board member, Australian Science Media Centre). *Trust Me, I'm a Science Communicator.*

Rosemary Nixon (Occupational Dermatology Research and Education Centre) *MythBusting: A Dermatologist's Approach to Cosmetic Advertising.*

Dr Graeme Pearman (Retired CSIRO scientist) *Freedom to Publish in Science.*

Dr Peter Pockley (Writer for *Australasian Science*). *The Wages of Spin: Sceptical Investigations into Creationism and CSIRO.*

Dr Paul Willis (ABC TV – *Catalyst*) *Why does the Media insist on getting it wrong?*

Annie Warburton (ABC Radio Hobart) *Nature v Nurture, or Why I'd rather have Sex than Gender Any Day.*

Can Kelp Help?

Fertiliser hype is not always a byproduct of bovine digestion

It has long been known that one can farm a soil to exhaustion. The crops taken from the soil cannot be taken away indefinitely. Sooner or later, one nutrient after another will be depleted. In the (never reached) ultimate case the soil is left as a mineral assemblage so inert that plant roots can extract nothing more from it.

It has also been long known that soils under farming need fertilizer applied to them to replace, in part or in full, the nutrients that are taken away with the plant crop. It was early realised that nitrogen, phosphorus and potassium, or the NPK trio, were the major nutrients that needed replacement. Nitrogen is trickier than the others because legumes, for example, can convert nitrogen from the air into useful fertilizer, reducing the amount of replacement needed. Potassium and phosphorus, however, have to come from the breakdown of natural rocks or from addition of chemicals containing them.

Soil scientists and plant nutritionists also identified the minor nutrients like magnesium and sulphur (to name but two) and then the trace elements like zinc and molybdenum. Some of these blow in on the air, like some useful sulphur gases, or are innately in the soil, or blow in as dust.

Scientists also found that the form of the nutrient was important. There are records of crops doing poorly on ferruginous soil, from a deficiency of iron. The iron was in the ferric form, which the roots could not make solu-

ble fast enough. So, ferrous sulphate was used and taken up as a remedy. But, it oxidised too quickly in moist air so designer ferrous chelated synthetic compounds were introduced with great success.

It takes only one of a score of nutrients to be deficient, for the plant to lack vigour. (You can fill a leaky bucket only to the lowest hole). The nutrients also interact with each other, so that a deficiency or surplus of one nutrient can induce difficulties with another nutrient. So, it is a careful and tedious process to set up fertilizer trials that avoid false results. If, for example, you have a crop growing in perfect harmony, it is not much use to add a test fertilizer to see if the yield increases, if it is already at a maximum.

Optimum growth

For optimum plant growth, not only are nutrients needed, not only does the chemistry have to be right, but also there are hormone type chemicals that can inhibit or enhance growth. One of the famous enhancer groups is gibberellin, discovered in rice in Japan in the 1920s. (It can make people grow bigger too). Other classes of growth promoters include cytokinins and auxins.

One can feed a crop on a soil with all of these classes of fertilisers, in the appropriate chemical form and one can add hormones — but still the crop can be poor. This is because there needs to be a way to hold the fertilizers in the right form in the right place for the roots or leaves to



Geoff Sherrington is a retired scientist who resides in Melbourne. He is an avid grower of chrysanthemums.

absorb them when needed. Pure sand is a poor soil because the essentials can be washed away too quickly. There needs to be material such as clay (which can bind certain nutrients until the roots are ready to take them) and clay-bearing soils become enriched in organic carbon compounds such as certain humic acids which do much the same thing — hence the emphasis on compost on garden shows on the telly.

Scientific trials

In my younger years at CSIRO Division of Tropical Pastures, we introduced a number of grasses and legumes from other countries to sustain the beef cattle industry in the tropics. We did fertilizer trials using many different combinations and levels of fertilizers, carefully weighed, dissolved and applied as sprays to the leaves, some of which went into the pots below. The pots used inert plastic pellets to hold the roots in place, so the whole fertilizer addition was from the spray. At intervals, the plants were harvested, divided into roots, leaves and stems, weighed and chemically analysed. These were proper scientific trials to evaluate the efficacy of fertilizer treatments. (I even learned to do a statistical mathematical Analysis of Variance by manual calculation because automatic calculators were only just becoming available.)

So, the reasoning turned to the replacement of extra material, giving back to the soil more than was taken. The hunt was on for organic materials in particular that would add NPK to the soil.

In the early days of agriculture in many countries, the surplus from cropping for animal food, including human, was returned to the soil. Faecal matter, blood and bone, hair and hide, hoof and horn, meat meal — all are still used. This started before the days of fertilizer factories but is continued by the ABC gardening shows. Today, the general purpose chemical fertilizer in my shed is a 14:4:8, being the weight percent of total N, P and K respectively. Pure urea is 46:0:0.

Kelp

Kelp or seaweed were early candidates as soil supplements, mainly because they were there on the beaches when they could have been there on the fields. Kelp analyses about 1 : 0.1 : 0.5, so it is not comparably nutritious, therefore, it makes a poor human food. Also, its precious little nitrogen can take some time to release (months) and it can lose ammonia that could be part of the smell of rotting seaweed. For centuries people have harvested kelp in particular from beaches after storms and placed it on fields, either before or after a period of composting or decomposition, or extraction of concentrated liquids. Roughly speaking, a farmer wanting to add nitrogen to a patch of land can add a tonne of urea or somewhere between 50 and 100 tonnes of kelp. I know what my tractor and I would prefer to do.

A similar comment arises from the sugar cane industry, a heavy user of NPK fertilizers. On garden shows we hear the virtues of using bagasse (the crushed remains of sugar cane after the sugar is pressed out). If this is such a good soil additive, why don't the sugar cane farmers rely on it instead of trucking it to capital cities to sell to home gardeners? Answer — because it is too poor in nutrients to justify the cost of returning to the nearby cane fields and because city suckers will pay high prices for fads.

Myths

This article is about the myths that have arisen about the beneficial effects of adding kelp products to soils to enhance crop yields. The story goes further, because when proper science established that kelp had no significant value as an NPK fertilizer, its promotion was extended by claims that it possessed beneficial hormones that did a magical job of nursing plants along — a so-called plant tonic.

When the tonic effect was researched, it too was found to be without foundation at the doses recommended. The whole regime of harvesting, treating, distributing and distilling the essences from kelp were in danger of being much ado about

nothing. This was a pity, because so many people had committed the work of their lives to the industry, there were many companies making and marketing kelp products and there has recently developed a great fashion for using “natural” kelp for “organic certified farming” (whatever that nonsense term might mean). Besides, the ABC gardening shows would lose about 75% of their features if they pulled all of the “muck and mystery” stories.

The Maxicrop case

Matters came to a head with a company named Maxicrop in New Zealand in way back in 1986. We have progressed little since then.

The Australian and New Zealand Association for the Advancement of Science (ANZAAS), in their periodical *The ANZAAS Mercury* of 10 June 2001, reviewed a book with the opening remarks in these words:

The Maxicrop case was one of the longest running court proceedings in New Zealand legal history in which the Bell-Booth Group sued the Ministry of Agriculture and Fisheries and TVNZ for damages (initially \$5.5 million, later amended to \$11.5 million). There were three causes of action: defamation, negligence and misfeasance.

Maxicrop is a concentrated seaweed extract, which was promoted as a fertiliser, providing nutrients and plant hormones. As it was to be applied at extreme dilution it was considerably cheaper than conventional fertilisers. As with farmers everywhere, New Zealand farmers in the mid-1980s were subject to economic pressures, and with fertilisers as a major cost, a cheaper alternative was welcomed.

Dr Edmeades was a scientist in the Soils and Fertiliser Group of the Ministry of Agriculture and Fisheries (MAF). After extensively reviewing the world literature on non-traditional fertilisers, and after receiving analyses of Maxicrop, he came to the conclusion that, used as directed, the product could not possibly provide the claimed benefits.

In April 1985 Dr. Edmeades ap-

Can kelp help?

peared on the TVNZ program *Fair Go*, with Mark Bell-Booth and David Bellamy, in which he presented his case against Maxicrop. It was this program which provided the basis for the subsequent legal action.

Dr Edmeades wrote a book, *Science Friction*, (now out of print) which was the subject of the following comments in *New Zealand Farmer's Weekly* of 20 March 2006:

One of the claims made by some liquid fertiliser companies is that plant growth substances (PGS) boost plant growth. Edmeades review of field trial data showed no such evidence when applied as recommended.

During the Maxicrop case Otago University scientist Dr Paula Jameson gave evidence supporting Maxicrop, which was challenged by scientists appearing for MAF in the case. She is now a professor of plant science at Massey University.

In *Science Friction*, published in 2000, Edmeades says Jameson was carrying out research on Maxicrop with some funding from MAF. She had claimed that Maxicrop was high in the plant growth substances (plant hormones) especially cytokinins, but in the court case she was more reserved about her findings. Advertising data on Maxicrop claimed the presence of cytokinins at 285 parts per million but Jameson revised the figure down to 1.3 ppm in court. But New Zealand and international scientists proved that, even if 285 ppm was accepted, it was still too low to be significant. Maxicrop would have to be applied at the rate of 98,000 litres/ha to elicit a response.

Both the fertilizer and the growth stimulant claims of the kelp materials were dismissed by Edmeades.

In Australia, we have prominent ongoing promotion of products of like character, such as Seasol, derived from kelp or sea weeds (but now with some extra fertilizer added) and claims for both the nutrition and hormone enhancement of growth. So what happens when scientists conduct trials?

Conducting trials

Starting on a light note, Emeritus Professor of Soil Science at Lincoln University, Tom Walker, once told farmers that a particular liquid fertiliser was an expensive way of acquiring a 44 gallon drum.

Here is a partial report of a more scientific study:

Evaluation of humic acid and other non-conventional fertilizer additives for onion production.

Erik B. G. Feibert, Clint C. Shock, and Lamont D. Saunders, Malheur Experiment Station, Oregon State University Ontario, OR, 2000.

Summary: *Eleven treatments in 1999 and 13 treatments in 2000 containing single or combinations of non-conventional additives were compared with an untreated check for their effect on onion yield and quality, and for their economic efficiency. The non-conventional additives were tested at commercial rates and methods of application supplied by the manufacturers. The treatments were incorporated into standard cultural practices for onions. In both years, none of the products tested increased onion yield or quality compared to the untreated check. With minor exceptions, at the application rates used in this study, none of the products supplied sufficient amounts of plant nutrients or humic acid for an improvement in crop production to be expected.*

Introduction: *A non-conventional additive can be defined as (1) any non-fertilizer material applied to soil or plants that is claimed to improve crop production; or (2) a guaranteed fertilizer material that is used in an unconventional manner, such as in very small amounts. Numerous non-conventional additives are being marketed. Growers need information on onion yield and quality responses to these products and their cost effectiveness.*

The objective of this study was to test the most commonly used products for onion production in the Treasure Valley at commercial application rates and methods. The products

tested can be included in the following descriptive categories: humic acid, Norwegian kelp (Ascopyllum nodosum) concentrate, biological inoculant with N-fixing bacteria, plant growth regulator (cytokinin and ammonium zinc acetate), organic fertilizer, and mineral nutrient solutions.

Another article extract, this one from the "dark side", is from an Organic Growers' forum:

Kelp extract and fish powder sprays on organically grown processing tomatoes. Tourte, Laura, 1997. *Organic Farming Research Foundation Information Bulletin*. Spring. p. 6-7, 9. The findings were summarised as:

Treating organically grown tomato crops with kelp and fish powder sprays yielded inconclusive results in a California study. The researchers concluded—as had others before them — that the efficacy of foliar treatments is ultimately dependent on multiple plant, soil, and environmental factors.

(Source: ATTRA — National Sustainable Agriculture Information Service PO Box 3657 Fayetteville, AR 72702)

Here is another study summarised:

Organic materials applied as seed treatments or foliar sprays fail to increase grain yield of wheat. DJ Miers and MW Perry, *Australian Journal of Experimental Agriculture* 26(3) 367 – 373.

Abstract: *Organic materials derived from fish, seaweed or bacterial cultures, and being sold as 'natural' aids to crop production, were tested for their effects on wheat yield in Western Australia. Six products based on seaweed (Seasol powder and liquid, Kelpak 66), fish (Eco, 10.8.8, Crop Booster) or bacterial culture (Cytosyme Seed Plus), and Complezal, an inorganic nutrient spray, were tested as seed treatments or foliar sprays. Thirty-two replicated field trials (plot size 100 m²) were conducted over 3 years using recommended rates of fertiliser and*

'commercial' weed and pest control practices.

No statistically significant increases in grain yield were detected from the use of any product in any trial. Average treatment grain yields in 18 trials in 1982 ranged from 99.4 to 101.2% of the control and in 12 trials in 1983 from 96.2 to 99.3% of the control.

The results give no indication that, at the application rates used, organic materials applied as seed dressings or foliar sprays can increase the grain yield of cereal crops in commercial cultivation.

Yet another "dark side" study summarised:

The integration of foliar applied seaweed and fish products into the fertility management of organically grown sweet peppers.

Jeanine Davis, Organic Farming Research Foundation Project Report, North Carolina State University, 2004.

Summary: Seaweed extracts and fish emulsion products are commonly used by organic vegetable growers to stimulate plant growth and increase yields. The efficacy and cost-effectiveness of using these products, however, has not been conclusively determined. In these studies, we examined the use of these products for organic production of bell peppers in western North Carolina. On farm trials and research station studies showed no response of plant growth or pepper yield to applications of one manufacturer's brand of seaweed and fish products.

A booklet named *Is Organic Farming Sustainable?* by Samuel P. Stacey B Ag Sc. (Hons) from the site www.sustainablefarming.info, says in part:

The productivity of organic farms are, on average, 10 to 30 percent lower than conventional farming systems [12, 22]. However, much higher crop losses are commonly reported. For example, in the USA organic wheat was reported to yield 43% less than conventional wheat

[23] and losses in New Zealand have been reported at 42% for organic barley and 32% for organic wheat [2]. In two South Australian trials, organic wheat yielded 67% and 72% less than conventionally managed wheat [24, 25], due to soil fertility decline and weed infestations. Furthermore, Ryan et al. [26] reported wheat losses between 17-84% on commercial organic farms in New South Wales, due to similar causes.

These crop losses represent serious declines in productivity. Some studies have reported similar or increased yields with organic farming [22, 27]. However, these studies represent exceptions to the norm. Long term field studies, conducted over 104 seasons, showed that organic farms were less productive than conventional farms in 75% of cases [22]. Productivity may also be affected by broader changes in land management.

Conversion to organic farming can pressure broad acre farmers to reduce cropping in favour of pasture livestock production [2, 20, 28]. Pasture legumes help to replace soil nitrogen through a process known as biological N fixation. Organic farming may also reduce outputs from intensive livestock systems, which, due to financial pressures, would likely shift towards forage grazing [29]. Some estimates suggest that the widespread adoption of organic farming could reduce cereal production in Europe by 40-50% along with substantial declines in livestock production [30].

(and later)

Numerous 'alternative' fertilizers are commonly used by organic farmers. These products are typically produced from seaweed, fish waste, vegetable and animal products. In addition, biodynamic farmers apply preparations made from plants and animal by-products, P500-P507, which are applied to soil in minute concentrations.

In the main, alternative fertilizers do not contain significant concentrations of plant nutrients, organic matter or plant growth substances at

recommended application rates [45]. In fact, a review of 28 organic products found no significant yield responses from any of the alternative fertilizers [45].

Biodynamic preparations are made by burying cow horns over winter that have been packed with manure, herbs and animal organs [15]. According to biodynamic practitioners, the microbial and chemical analyses of biodynamic preparations are: "secondary to the concentrating effect of the growth of life forces present in the earth during winter" [15].

One of the papers cited by Stacey (reference 45) is, **The effects of liquid fertilizers derived from natural products on crop, pasture and animal production: a review.** Edmeades, D.C. *Australian Journal of Agricultural Research*, 2002. 53: p. 965-976.

Abstract: The results from field trials measuring the effect of liquid fertilisers derived from organic materials on crop yields are summarised and reviewed. Trials comparing the efficacy of 26 specific products and 2 unnamed generic products were identified. Of these 28 products, 15 were derived from seaweed, 4 from fish waste, 5 were of vegetable origin, and 2 were from animal products. Cereals were the most frequently used test crop (328 recorded treatment effects) followed by root crops (227), legumes (88), pastures (59), and vegetables (52). Fifty-three other treatment effects were recorded on crops such as rape (15), peanuts (8), tobacco (6), and miscellaneous other crops (25). The effects of liquid fertilisers on animal performance were measured in 4 trials.

The observed effects of these products on a wide range of crops were normally distributed about zero with an equal number of positive and negative 'responses'. The frequency of statistically significant events, both positive and negative, was consistent with probability theory, assuming that the products are ineffective. The range of observed effects are also consistent with the normal variability

ity associated with field trial experimentation, taking into account the odd intrusion of other experimental errors. There was no evidence to support the conclusion that at least some product-types or products were effective on some crop-types, crops, or cultivars. Similarly, liquid fertilisers had no effect on animal production when applied as recommended.

This conclusion, based on the field evidence, was consistent with, and could be predicted from, independent evidence showing that these products do not contain sufficient concentrations of plant nutrients, organic matter, or plant growth substances (PGSs) to elicit increases in plant growth when applied as recommended.

This is the same Dr Edmeades who was involved in the New Zealand court case. The ironies remain that Dr Edmeades no longer works for the New Zealand Ministry of Agriculture & Fisheries, Maxicrop is still on sale and from a quick scan, the Internet sites promoting organic farming and products using kelp/seaweed addition (mostly based on hearsay, not science) outnumber the researched, "no effects found" papers by about 100 to 1. (I was unable to find a scientific paper refuting the findings quoted 2 paragraphs above here.)

Long term readers of *the Skeptic* might see parallels with the promotion and sale of ultra diluted homeopathic solutions and excessive vitamin and mineral preparations for human consumption. Worthless products are being sold at high prices with claims that have not been and cannot be substantiated. One reason why regulating Government officers are loath to act was hinted in the NZ Maxicrop case. The Judge, in the first instance, found against the Ministry, not because the data were wrong, but because nothing in his law book prevented a company from selling a worthless product.

Caveat emptor.



Australian Skeptics Prize for Critical Thinking,

The Australian Skeptics Prize for Critical Thinking, part of the Eureka Prizes from 1996 until 2005, is now a stand-alone Prize. It will be awarded for work that investigates conventional wisdom and beliefs which lack reliable evidence or scientific method, and that promotes rational thinking about such matters by the public, educators and the media.

For the past 10 years we have been gratified by the high standard of entries by winners and runners up. Prize recipients have included psychology students (for investigation into the genesis of superstitious beliefs, for an analysis of post-hypnotic suggestion, and for research into public perceptions of risk); a lecturer in the School of Policing Studies at Charles Sturt University (for the first empirical assessment of criminal profiling accuracy); a member of the Department of Philosophy at the University of Melbourne (for a critical analysis of critical thinking courses); a member of the Adelaide University Media Unit (for an article on how successful science communication is biased towards the sensational and fanciful); a Professor in the Department of Computer Sciences at ANU (for statistical research refuting claims of hidden coded messages in the Hebrew Bible), a teacher at Albany Hills State Primary School in Queensland for a science program that equips students to 'seek the evidence' for everyday assumptions; and a website that rates the accuracy of media medical stories.

The Prize of \$10,000 is to reward critical investigation of irrational paranormal beliefs or pseudo-scientific claims. Entries are welcomed from any interested Australian, whether involved professionally or by way of private enthusiasm. For example, eligible work includes the contribution of teachers at any level of education, who have devised programs that encourage critical thinking in students, beyond normal curriculum requirements. Similarly we welcome entries from journalists who have promoted critical thinking or exposed threats to it. The work can be in any media and can be one item, a series or an ongoing activity.

Members of Australian Skeptics state committees and their immediate families are ineligible to nominate.

Work submitted must have been undertaken/published/broadcast in Australia by an Australian citizen or permanent resident within the 5 years prior to the closing date for entries.

Entries will be judged according to originality, depth of critical thought and public benefit.

The judging panel may, at their discretion, award up to two extra prizes of \$2000 each to runner-up entries of particular merit.

The 2006 Skeptics Prize will be awarded at an awards dinner on Saturday, November 18, 2006 at the Australian Skeptics Annual Convention in Melbourne. Six copies of each entry, marked Skeptics Prize, must reach PO Box 268, Roseville NSW 2069 no later than COB October 6, 2006.



Cartoon Controversy and Religious Fanaticism in Nigeria

Trouble in a troubled continent

When in January the cartoons of Prophet Mohammad published in European newspapers set off violent protests in Asia and the Middle East, tension started brewing in Nigeria, particularly in the Muslim majority states in the North. Many people expected protests and riots by Nigerian Muslims in solidarity with their confreres in the Islamic world. Most often Islamic extremists in Nigeria vent their anger and frustration by attacking and killing non-Muslims in their midst. In Kano, the anti-cartoon demonstrations passed without major incidents. According to newspaper reports, members of the Kano State House of Assembly rose from an emergency session and adopted a resolution condemning the publication of the cartoons. Afterwards, the lawmakers came to the front of their building shouting 'Allahu Akbar' and set ablaze the Danish and Norwegian flags in 'symbolic demonstration of the anger of the Kano people'. Dozens of Muslims joined the lawmakers in chanting 'Allah will punish the man who insulted the Prophet' during the burning exercise.

But in Bornu, Bauchi, Niger and Yobe, the anti-cartoon anger boiled over causing death, anarchy and destruction. In Bornu no fewer than 58 persons were killed and 30 churches burnt by Muslim extremists in the state capital, Maiduguri.

Most of the dead were Christians. Among them were a priest and his assistant, who were burnt to death

in their residence. In Bauchi, Niger and Yobe states at least 20 people were reportedly killed and seven churches burnt by Muslim fanatics. The arrival of the bodies of southern Christians, killed during the riots in Maiduguri, sparked reprisal attacks and killings of Muslims in the southern town of Onitsha. Christian mobs and gangs rampaged through the city with machetes and shotguns. At least two mosques were razed and 78 people were killed, including several school children, who were allegedly killed by a Muslim soldier protesting the death of his kinsmen.

As in most cases of religious violence in Nigeria, it's difficult to know the exact number of casualties. The government and police officials have been playing down the number of victims to forestall further outbreak of violence. *But the fact remains that more people have died in Nigeria due to the cartoon riots than in all other parts of the world put together!* Thousands of Nigerians have lost their lives to religious violence in Nigeria since 2000.

Nigeria's ethno-religious mix

Nigeria, Africa's most populous nation is a country, has a volatile ethno-religious mix. Of over 250 ethnic groups the major ones are Hausa/Fulani, Yoruba and Igbo. The Hausa/Fulanis are in the North while the Yorubas and Igbos are in the South. Both the majority and the minority ethnic groups are often locked in a battle for control and



Leo Igwe, an occasional Skeptic correspondent, runs the Nigerian Skeptics.

domination of Nigeria. For instance the 1966 coup led by Major Nzeogwu, an ethnic Igbo, was widely interpreted as an attempt by Igbos to dominate the nation. Soldiers from the North staged a counter coup and killed the then Head of State, Gen Aguyi Ironsi who was Igbo. This led to mass killing of Igbos in the North and a bloody civil war (1967-70) in which over one million Igbos died. There have been several ethnic/communal clashes in Nigeria since got its independence in 1960. But the ethnic problem in Nigeria is further complicated by religion.

Nigeria has three main religions — Islam, Christianity and Traditional Religion. Northern Nigeria is predominantly Muslim while Southern Nigeria is dominantly Christian. The two main religions — Islam and Christianity — are in some cases distributed along ethnic lines. The Hausa/Fulanis in the North are mainly Muslim. The Igbos in the South are mainly Christian while the Yorubas in the South-West are mixed. Many Igbos reside and ply their trade in the North. While many Hausa/Fulanis from the North live in the South. So every ethnic clash, especially between the Igbos and the Hausa/Fulanis, has a religious undertone and vice versa.

Origin of religious violence in Nigeria

Religious violence is a new and imported phenomenon. African Traditional Religion has no place for violence and conflict in its observance. This is because it is not imperialistic. It does not seek to conquer or convert anybody. So religious violence came with Islam and Christianity that have continued to grow through conquests and conversion.

Islam and Christianity were introduced by Arabs from North Africa and white missionaries from Europe respectively. The two religions have succeeded in displacing, annexing and subduing the Traditional Religion. Islam owes its current structure and dominance to the 1804 Jihad of Sheikh Uthman dan Fodio. But the 1804 jihad did not get to

most parts in Southern Nigeria which later became the stronghold of Christianity. So Nigeria inherited a jihadist Islam, that is, an Islam that is promoted and propagated by force and violence. Whenever Muslims in Nigeria feel provoked or whenever they feel that their faith is under threat, they declare Jihad, that is, they resort to violence. Thus the jihadist character — fighting, war and violence — is the defining and driving force of Islam in Nigeria. And the jihadist Islam in Nigeria has one target and objective — to conquer and convert all non-Muslims and to Islamize the entire nation by force. But jihadist Islam has had very limited success, because Nigeria also inherited an evangelical Christianity, that is a brand of Christianity that seeks to convert all non-Christians and Christianize the entire nation. So there is a silent war going on in Nigeria, that is the war between Christianity and Islam.

During the colonial days European missionaries made limited inroads and progress in Northern Nigerian due to opposition from the colonial authorities and Islamic leaders. But since independence, Christians (including Igbos) from the South have been at the forefront of the spread of the Christian faith in Northern Nigeria. And this has not gone down well with Islamic fanatics who see Christians, not only as agents of Israel and the West, but also as enemies of Islam who should either be enslaved or killed. So it does not matter if it is American bombing of Afghanistan, or Israeli shelling of Palestinian territories, or the publication of the cartoon of Prophet Mohammad in Denmark, or the staging of Miss World Beauty Pageant, Muslim extremists in Nigeria always vent their anger and frustration by attacking and killing Christians in their midst.

On the other hand Northern Muslims who reside in the South have been instrumental to the spread of Islam in Southern Nigeria. But due to the jihadist nature of Islam in Nigeria they have made very little progress, especially in the South-

East and South-West Nigeria. Still the presence of Northern Muslims, a few mosques and local converts infuriate local Christian leaders who see them as part of a grand plan by Northern Islamic leaders and their Arab cohorts to Islamize southern Nigeria.

Until recently there has not been any major incident of religious violence between Christians and Muslims in Southern Nigeria. But there have been several instances of religious killings, bloodletting and massacre of Christians in Northern Nigeria. In 1991, many Christians were killed by Muslim fanatics protesting the visit to Kano of a German Evangelist, Reinhard Bonnke. Most of the victims were beheaded or butchered like cows or thrown into wells where they drowned. But the riots in 2000 over the implementation of sharia law introduced a new and dangerous dimension to religious conflicts in Nigeria. Many of those who died during the sharia riots were Christians from the South. And the arrival of their bodies sparked reprisal attack and killing of Muslims in Southern Nigerian cities — Aba, Owerri, Umuahia etc.

We have just witnessed a repeat of that orgy of violence in the aftermath of the cartoon riots. So what have today is a situation where the killing of Christians in the north will lead to reprisal attacks and killing of Muslims in the South. But will that put an end to religious violence in Nigeria? I don't think so. And that leads me to the other reason why religious violence persists in the Nigerian society. That is religious indoctrination.

Religious indoctrination is the first form 'education' children receive in Nigeria. At a very tender age, children are bombarded and brainwashed with assorted religious dogmas, fanatical doctrines and spiritual nonsense. In Northern Nigeria children are sent to Koranic schools where they are forced to rote-learn and memorize koranic verses. They are made to see the world from only

Continued p 56 ...

Alcoholics Anonymous: The Failure of Faith

**It's a popular treatment,
but does it work?**

We no longer throw drunks into asylums and jails. We are humane and informed, and instead we send them for care. We may still frown on their weakness, but we know that alcoholism requires treatment, not punishment.

There are many different theories of alcoholism. The predominant method of treatment in Australia and the US is based largely upon the Minnesota model of alcoholism. The Minnesota model was developed in rehabilitation centres such as Hazelden in Minnesota, USA in the 1970s and 80s. It combines the twelve-step program of Alcoholics Anonymous with the medical model of addiction formulated by mainstream health care professionals.

The medical model is an attempt to consider and treat alcoholism as a medical condition, rather than regarding it as a moral weakness. According to this model, alcoholism is a disease. That is, it has a recognisable set of symptoms and follows a predictable course. Furthermore, alcoholism is a primary disease, meaning that it should not be regarded as a secondary symptom of some other condition; it must be recognised and treated in its own right. Closely associated with this idea is the view that alcoholism has a significant genetic component, although environmental influences are not entirely discounted.

The twelve-step treatment

The twelve-step view of alcoholism could equally be described as the skid-row model. According to this view, alcoholism is a “physical, mental and spiritual” disease that is

progressive, incurable and ultimately leads to “jails, institutions and death”. The theory was developed by the early members of AA. I'm not sure exactly what it means — I have never been able to find a definition of a “spiritual disease” — but it sounds bad. Nevertheless, there is hope for the hopeless alcoholic: divine intervention by a “Higher Power” or God.

If you think this all sounds a little strange, you wouldn't be the first. But this is a treatment program that is widely acknowledged and respected. Thousands have witnessed their recovery. Professionals refer their clients for treatment. Courts compel defendants to attend twelve-step meetings, sometimes as an alternative to jail. AA boasts of two million members, of whom it says:

People who once drank to excess, they finally acknowledged that they could not handle alcohol, and now live a new way of life without it.

The theory may be odd, but it remains the most effective form of alcoholism treatment.

It is easy to find slavish testimony to the overwhelming effectiveness of AA and other twelve-step groups. AA is overtly religious and is often practiced with religious dedication. Evangelism is a key part of the program and many converts are only too keen to preach. Rehabilitation centres rarely cite specific success rates, but their public relations departments hold out the promise of freedom from addiction and make sure they create the impression of a high rate of success. On the other side,



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several anti-AA diatribes have been published and a search of the Internet soon uncovers many pages of sometimes vicious anti-AA material.

Evidence hard to find

Empirical evidence is harder to find. A survey of research into the outcomes of alcoholism treatment is daunting: there are an enormous number of studies and even more conclusions. Many studies are flawed, lacking a control group. Self-help groups like AA, with their dynamic, anonymous memberships are difficult to study, and these groups discourage quantitative research. Different definitions of alcoholism and different measures of success often make it impossible to meaningfully compare the results of studies. However, there have been some critical surveys of the research, and the message seems clear.

In their *Handbook of Alcoholism Treatment Approaches: Effective Alternatives*, Reid K. Hester and William R. Miller surveyed a variety of treatment approaches to determine which were most effective. They reviewed 211 studies, excluding those relying primarily on anecdotal evidence or for which there was no control group. About AA, they conclude:

Although Alcoholics Anonymous (AA) is widely recommended by US treatment programs, its efficacy has rarely been studied.... Only two controlled trials were found in which AA was studied as a distinct alternative, both with offender populations required to attend AA or other conditions, and both finding no beneficial effect.

Their conclusions on the effectiveness of treatment in general could not be more definitive:

The negative correlation between scientific evidence and application in standard practice could hardly be larger if one intentionally constructed treatment programs from those approaches with the least evidence of efficacy.

In English, that means we couldn't do worse if we tried.

Psychiatrist and author Martin Seligman provides a less formal but broader survey of the outcomes of a wide range mental illnesses in his book, *What You Can Change and What You Can't*. One of those illnesses is alcoholism. In his introduction he leaves no room for doubt:

No treatment is known to improve on the natural course of recovery from alcoholism.

In later chapters he elaborates: Seligman believes AA may be effective treatment for a subset of alcoholics, but recognises that evidence is lacking for this proposition.

George Vaillant is a Harvard psychiatrist and a highly respected researcher in the field of alcoholism. He is a long-time proponent of the medical model and a non-alcoholic trustee of the General Service Board that administers AA. Vaillant conducted an eight-year study of alcoholism treatment that included hospital detoxification, compulsory attendance at AA meetings, and a counselling program based on the medical model. He described the research as "the most exciting alcoholism program in the world". His optimism was unwarranted: after the study was completed Vaillant forthrightly concluded that:

There is compelling evidence that the results of our treatment were no better than the natural history of the disease.

He reflected:

... the best that can be said for our exciting treatment ... is that we were certainly not interfering with the normal recovery process.

Even this small consolation is open to question: the study found that only 32% of those who attended AA achieved abstinence or infrequent drinking for ten or more years, whereas amongst those left to their own devices, 81% achieved the same results.

The conclusion is frightening: a substantial segment of the health-care industry is informed by a failed theory, or more precisely, the failed creed of a religious sect. This is an absurdity that few seem to notice,

yet it is akin to sending patients to the Moonies for the treatment of depression. It demands an explanation. Actually, it demands two explanations: firstly, if AA doesn't work, what is its appeal to alcoholics, and, secondly, why has it become accepted as mainstream treatment?

Treatment or creed?

The reason for its appeal to alcoholics presumably lies within the beliefs and practices of AA. It certainly attracts, or maybe entraps, many alcoholics, even if it makes no difference to their drinking. AA offers salvation: when alcoholics enter AA they are encouraged to "surrender their will and lives over to the care of God", who will provide deliverance from active alcoholism. AA advocates a program of confession, prayer, meditation and evangelism to maintain an on-going relationship with God. These are the beliefs of a bland and unimaginative religious creed, and presumably have the same appeal as similar religious philosophies.

Like many religious creeds, the philosophy is a closed belief system. An excerpt from the *Big Book*, the sacred scripture of AA written by its early members in the late 1930s, makes it clear where the blame for failure lies:

Rarely have we seen a person fail who has thoroughly followed our path. Those who do not recover are people who cannot or will not give themselves to this simple program, usually men and women who are constitutionally incapable of being honest with themselves.

If an alcoholic finds no relief, he need only look to himself: he is not applying the principles of the program thoroughly, or perhaps he is just one of those poor, defective individuals who is constitutionally incapable of being honest with themselves. Generously, AA concedes that:

There are such unfortunates. They are not at fault; they seem to have been born that way.

Equally useful in maintaining a closed belief system is the concept of

Alcoholics Anonymous

denial, which is central to the Minnesota model. Untreated alcoholics suffer from denial, which means they are psychologically incapable of understanding the consequences of their behaviour. After all, if they really knew what they were doing, they'd stop, wouldn't they? According to AA:

The denial associated with addiction is cunning, baffling and powerful and affects the patient, helper, and the community.

Denial is often portrayed as a wily demon trying to drag alcoholics back to deeper torments, providing them with all kinds of rationalizations and excuses. And to the converted, any thought or idea that contradicts the orthodoxy of the creed appears to be a rationalization or excuse. Doubts that you are "powerless over alcohol", that your life has become "unmanageable"? Denial. Doubts about surrendering your will and life to God? Denial. Doubts about divine intervention? Denial. Doubt and denial are neatly conflated, and doubt can be dismissed without further consideration.

According to AA, the plight of an alcoholic can only be truly understood by another alcoholic. Outsiders are usually considered unhelpful or even dangerous. These people can easily lead "newcomers" from the true path to recovery. In their *Big Book*, AA explains how psychiatrists, doctors and family members are unable to suitably relate to or understand an alcoholic.

But the ex-problem drinker who has found this solution, who is properly armed with the facts about himself, can generally win the entire confidence of another alcoholic within a few hours. Until such an understanding is reached, little or nothing can be accomplished.

When an alcoholic approaches another in this way, "*The man obviously knows what he is talking about ... he is a man with a real answer*". Only those who have experienced alcoholism are fully able to understand and treat it. Presumably, for

an amputation, a surgeon with no arms is best.

Unsurprisingly, dissent is no more acceptable within the group. Alcoholics who reach AA are soon relieved of any pretensions of autonomy. According to the aphorism, "*It was our best thinking that got us here*". The implication is clear: alcoholics should not rely on their own thinking. Instead, they must learn to overcome their wilful pride, put aside their own ideas, and accept the salvation that has been offered to them. To someone who is desperate, the promise of salvation and relief is an extraordinary pressure to resist.

Professional acceptance?

An explanation for AA's acceptance by the professional community is more difficult to formulate. Many reasons have been offered: alcoholics are notoriously difficult to treat and professionals are often attracted to more promising fields; the interests of pharmaceutical companies are limited and consequently research funding is scarce; the field of drug and alcohol treatment has many unqualified and untrained workers, many of whom came from twelve-step backgrounds; even if AA is ineffective, there is no better alternative. None of these seems compelling, although each may play a role. However, some of the blame must lie with the apathy of doctors and psychologists. Doctors who swear, at least, to do no harm.

Alcoholism, and drug addiction in general, causes profound long-term suffering for millions of people. A multi-billion dollar treatment industry is dedicated to alleviating its effects, but instead serves to perpetuate the suffering. Although most alcoholics never seek help, a significant minority do. Like everyone else, they are entitled to professional, compassionate and informed treatment. Instead, at a time when they are perhaps most vulnerable, they are usually subjected to religious indoctrination wrapped in a thin veneer of medical terminology.

If alcoholism treatment were a pill it would, of course, have to go

through rigorous double-blind testing before it could be prescribed. It would fail as surely as snake oil. Yet it remains widely promoted and many are compelled, coerced or pressured into participating. However passionate and moving the testimony of evangelists, the results speak for themselves: apart from the usual remissions, it doesn't work. Instead, it condemns alcoholics to failure. Then it condemns them for that failure.



... Controversy from p 53

one dimension: Islam Under the guise of Koranic indoctrination, infants have their minds infused with illusions, hostility and hatred for unbelievers, for Israel, for America and the West.

Children are taught to have little or no regard for human life, especially the lives of nonbelievers. So children graduate from Koranic schools and religious indoctrination centers to become religious bigots, terrorists, suicide bombers, and merchants of deaths and enemies of open society.

The message of science, reason, free thought, open mind, tolerance and critical thinking comes too little and too late. When their minds have been set and steeled by dogma, blind faith, absolutism, intolerance, illusion, superstition and holy hatred. When the will to doubt is irreparably destroyed.

Religious indoctrination makes it practically impossible for children and youths to participate and contribute meaningfully to modern life and human civilization. As H. L. Menken says 'Men become civilized not in proportion to their willingness to believe, but in proportion to their willingness to doubt'. I look forward to a time when this message of Enlightenment will form the plank of child upbringing and public education in Nigeria and the world at large.



Dying with Dignity

Asserting a basic human right

Imagine a frail old man who has been living in a nursing home for the past 12 months. He has now reached the stage where medications can no longer control his symptoms effectively and give him a reasonable quality of life. He has increasing cardiac failure, is confused, incontinent, breathless and has been bedridden for the last couple of weeks. Some years ago he suffered a mild stroke that has left him with impaired vision and an inability to absorb the written word. Over recent years he has often expressed the wish that when his time comes, he does not want "things to be dragged out".

The nurse comes on for the morning shift and finds that the man has deteriorated since she went home on the previous day. She phones his doctor, who is busy seeing patients all morning and therefore takes the easy option and instructs the nurse to call an ambulance to take him to the emergency department at the local hospital. There he is given treatment which, for a short period of time, brings about a slight improvement in his condition, but the strange faces and unfamiliar environment result in bewilderment and acute anxiety. Our gentleman is admitted to the medical ward as a private patient under the care of a consultant physician. Several relatives arrive shortly after and they all tell the nursing staff that neither he nor they want any life-prolonging treatment for him. They would just like him to be kept comfortable.

Some hours later he suddenly deteriorates significantly and looks as if he is going to die. Because the attending physician has not yet seen him and therefore has not documented in the patient's notes that he is not to be resuscitated, the nurses feel compelled

to commence CPR and call in the hospital's medical emergency team.

The emergency doctor inserts another needle into a vein in the arm to administer some more drugs while the nurses continue to do CPR. The doctor inserts a breathing tube down our gentleman's throat. He is now unconscious. CPR is continued for several more minutes during which two of his ribs are broken, until the physician arrives and declares that it would be futile to continue. Thus this gentleman has had an agonising, totally undignified death, instead of being allowed to die with dignity and in peace. Unfortunately this is an all too common scenario.

The problems

There is a perception amongst nurses that they must attempt to resuscitate all patients unless there are written instructions to the contrary. Even some doctors are unsure of the legalities in this regard. This is an entrenched culture with no scientific or logical, or even legal basis. However, the fear of litigation, if resuscitation is not attempted, is very real for many nurses. When one adds to this that some doctors, for a variety of reasons, are reluctant to write up NFR (not for resuscitation) orders, it becomes evident that dying people can be faced with frightening problems. Let us examine some of the issues here.

CPR was instituted for sudden, potentially reversible events, eg, electrocution, near drowning, heart attacks etc. It was never meant to stop old and/or terminally ill people from dying. It is well documented in medical literature that attempts at resuscitation of these types of patients are



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Dying with dignity

not successful. (The definition of successful resuscitation is that the patient leaves hospital in a neurologically normal state). In the rare cases where resuscitation is successful in the sense that death has been averted for the moment, the patient dies very soon afterwards. All that has been achieved is that the patient's suffering has been prolonged. The impact of this on family and friends should not be underestimated.

The predicament of a busy GP is understandable. With a waiting room full of patients, the last thing he wants is a request from a nursing home to come and see a patient. It is, however, questionable whether the above course of action is the only option open to him, especially since the GP is probably well acquainted with the patient's condition.

Registered nurses have a very significant role to play in the Aged Care sector. Communicating with the residents' families, and the residents themselves whenever possible, to ascertain their wishes in regard to end of life management is of the utmost importance. Pressure of work is a real issue in many nursing homes and one can only speculate how often this is the reason why deteriorating patients are sometimes transferred to acute care hospitals and staff think it preferable that the resident die elsewhere. Well managed nursing homes factor in unexpected care needs in their staffing allocations. If nurses are not under extreme time pressure they might then be more willing to allow the residents to die in their familiar surroundings with familiar faces caring for them. Some nursing homes ensure that their staff feel confident about providing comfort for dying residents and their families. After all, people go into nursing homes expressly because they are nearing the end of their lives.

The Federal Government's policy of "Ageing in Place" needs to be taken more seriously. Obviously, if a nursing home resident has a fall and sustains a fracture, it is then appropriate to transfer them to an acute care facility to get the fracture treated. It is not appropriate if their heart failure is no longer responding to treatment.

Informed consent is often not obtained. Asking a resident or their family if they want "everything to be done to save them" if they take a turn for the worse is often not enough. Many people have grossly unrealistic expectations of what medical technology can achieve. Appropriate and clear information regarding available choices needs to be given, tailored to the person's ability to comprehend. If the patient is of sound mind, the relatives' wishes are unimportant. Some residents and their families have discussed their wishes, are well informed about their options and have made rational decisions. Others, however, have simply no idea of what is involved, or of likely outcomes. End of life options need to be discussed with families and good information needs to be given, so that well informed choices can be made. Ideally this is done with the attending doctor, documented in the resident's history and the staff are clearly instructed regarding the residents' and their families' wishes.

The fear of litigation, if resuscitation is not attempted, is based on ignorance rather than on fact. The principle "First do no harm" applies equally to nurses as it does to doctors. In fact, one could visualise the relatives of a patient who was subjected to a cruel death because of an inappropriate resuscitation attempt to sue for battery or assault. These days all hospitals and aged care institutions should have policies on dying with dignity. Our own Nursing Scope of Practice states that nurses should not carry out any treatment unless it has a reasonable chance of being successful.

In times gone by death, like birth, was a part of every family's life experience because it mostly happened in the home. Family members cared for dying relatives at home and took turns at sitting with them. This is not such a common event today. Dying is not something most people like to talk about. It tends to happen in hospitals and nursing homes. With this shift in culture somehow the medical profession (including nurses) have taken ownership of the dying process and there is less acceptance of death as a good outcome for sick old people who are suffering.

The solutions to these problems are multifaceted and complex, but not unachievable. Let us now consider what could have happened to our gentleman if attitudes had been different.

When the nurse in the aged care facility finds that this man has deteriorated she could have assessed him and given his doctor a detailed account of his condition along with information documented in his file regarding his end of life wishes. The GP would have instructed the nurse to keep him comfortable and to notify the relatives, as not much more could be done. The GP has his surgery organised such that there is time for house calls and/or emergencies in the middle of the day and he visits his patient in the nursing home and his instructions to the nursing staff are centred around symptom control. He is being cared for by people he knows and trusts. His relatives are by his bedside and he knows he is dying and is quite at peace about it all.

The reality of course is not always like this. The GP could be away on holidays and a locum, who is not acquainted with our gentleman, could be on duty. The patient could end up in the emergency department of the local hospital for a variety of reasons and still be admitted to the medical ward. Here, experienced, capable and well informed nurses could allow him to die in peace surrounded by his relatives, even if occasionally unfamiliar nurses appear at his bedside to ensure he is comfortable.

Health professionals talk about evidence based practice at every juncture. Why is this principle so often totally ignored in regard to resuscitation of old and/or terminally ill people? Just because we can intervene, does it necessarily mean that we should?

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James Allan Responds to Nicholas Cowdery

How delightful it was to see that the Director of Public Prosecutions for NSW had read my piece in *the Skeptic* (26:1) arguing against bills of rights for Australia. It can only be a good sign that a person in such a position is reading *the Skeptic* and that he classifies himself as “a life-long atheist ... and therefore [is] not attracted to any basis in faith for natural law and natural rights”. So far, so good.

So why does he disagree with me and conclude by saying that he “would MUCH prefer to have contentious issues decided by judges in accordance with the rules made by politicians”? He starts by claiming such instruments protect individuals against the state. Rubbish. The bills of rights themselves do not protect anything. The ex-Soviet Union had one. It read beautifully. It did nothing. What Mr Cowdery must mean is that in nice western democracies (and nowhere else) having a list of abstract moral claims in the

language of rights serves to help unelected judges give citizens a better deal than they’d get in that same western democracy without a list of vague, amorphous — but emotively stirring — entitlements.

Well, that’s a straight out empirical claim. Mr Cowdery mentions freedom of expression. Here’s a fact. Australia, without a bill of rights of any sort until very recently and without one at the Commonwealth level still, affords its citizens more liberal free speech parameters than does Canada (where there’s a very strong Charter of Rights and where the judges have the last word). Sure, in Canada everyone can point to this fine phrase — “the right to freedom of expression”. But it is not self-executing. Everyone knows there are limits on what citizens can say. You can’t go into a cinema and yell “fire” and then think you’ll be protected by the bill of rights. The question boils down to where to draw very difficult, tough lines. So why not look at the facts when it comes to, say, campaign finance rules? Those rules are more liberally drawn here in Australia. Same goes for hate speech provisions. Same goes for defamation rules. In terms of how the right to free speech plays out in fact, Australians have more scope to speak their minds than do Canadians. Where, in fact, is Mr Cowdery’s self-proclaimed scepticism?

At the risk of boring the non-lawyers senseless let’s point to a few more real life cases. In *RJR Tobacco* the Supreme Court of Canada (5-4) held that a statute restricting tobacco advertising outside schools was a breach of the right to free expression. Mr Cowdery might prefer the call judges there made, but many smart, reasonable people wouldn’t. In

Australia, if you don’t like the line politicians are drawing on these issues, you can spend a few of your Saturdays campaigning for a different party. In Canada, where I’m from, you cannot do anything. The judges’ view prevails, until they retire and you can replace them with others with sentiments more like your own (which is why people in the US often base their presidential vote on the sort of judges the president is likely to pick).

Mr Cowdery also trots out the terrorist laws and the refugee laws. On the latter the simple fact is that this is a near insoluble issue. Again, if one looks at the position reached by the judges in Canada and the UK, it is not at all obvious that those outcomes are preferable to the outcomes reached here in Australia. I am a long-time subscriber to the *Economist* magazine. I am a free-trader. But I do have doubts about the wisdom of any absolute free movement of people. Unless you would let any person anywhere move here, then there need to be rules and they need to be enforced. And we all know that such rules in some circumstances can seem very harsh. Too harsh at times.

In Canada the judges, using the Charter of Rights, have ruled that every person claiming refugee status (and which person merely seeking a better economic life would not?) must be given an oral hearing. (The case is called *Singh* and was decided in 1985.) Because it was pronounced in the language of eternal, fundamental rights the politicians have not been able to respond, even as the consequences have become worse and worse. What are they? Well, in Canada hundreds of millions of dollars — maybe billions — of taxpay-



James Allan, Garrick Professor of Law, University of Queensland, has belonged to *Skeptics groups in Canada, New Zealand and Australia.*

James Allan responds

ers' monies go to legally aided lawyers who appear in these cases. The government simply cannot cut the timeline on applications or cut the backlog of cases. On the Canadian governments' own figures, it can take up to five years or more for an individual applicant to work through the system. (And hands up all those out there who think applicants who fail are then easy to find? They are obviously at liberty because any detention policy is off limits.) Oh, and the former head of the Canadian Immigration Service has gone on the record saying he thinks the security implications of the system are potentially catastrophic. Many Americans think Canada has the most porous system going. If that is what Mr Cowdery prefers he should say so. And if he thinks there is some middle ground he should state how we get there and why we should think judges will get us there.

Here's what sceptics do. They look at the facts and they are prepared to make tough calls. They don't think everyone will agree with them. But they generally shun simply spouting moral abstractions and sitting around in groups chanting "freedom of religion" or "freedom of speech" in favour of looking at the facts and weighing costs and benefits. Nowhere does Mr Cowdery tell us why he thinks a bunch of people trained in the practice of law might make good policy makers and why he thinks a law degree and a dozen years practicing law in a big law firm produce people of superior moral perspicacity.

I, too, am a lifelong atheist and a dyed in the wool skeptic. I also practiced law in a big Toronto firm and at the bar in London before taking up teaching. On questions of gay marriage, of euthanasia, of what role money should play in elections, of abortion, of whether Muslim girls should be able to wear headscarves to schools, and all other moral — as opposed to legal issues — I would prefer, any day of the week, to let the numbers count and go with the views of plumbers, secretaries and all citizens, as opposed to giving a

few committees of ex-lawyers a definitive last word. (And note, please, the irony that when judges disagree amongst themselves they vote. The decision-making rule is simple. You count heads. You do NOT go with the judge who makes the most references to J.S. Mill or to Milton or to some international rights convention.)

No doubt if he had time Mr Cowdery would qualify his position and say that he doesn't like the Canadian and US bills of rights that give a last word to the judiciary but prefers the NZ and UK versions, the statutory types. These are claimed to be less potent. They are claimed to give rise to some sort of ineffable dialogue type process. That claim, in my view, is false. In a very recent UK House of Lords decision, the top UK judges said that they could use their "weak" bill of rights (the exact sort that the State of Victoria has just copied) to alter the way they interpret other statutes. Once a bill of rights is in place, apparently, giving statutes the meaning the judges themselves happen to prefer:

does not depend upon the presence of ambiguity in the legislation being interpreted. Even if, construed according to the ordinary principles of interpretation, the meaning of legislation admits of NO DOUBT, [the bill of rights] may none the less require the legislation to be given a different meaning ... [It] may require the court to ... depart from the intention of the Parliament which enacted the legislation ... [and] to read in words that change the meaning of the enacted legislation.

That was Lord Nicholls in the case of *Ghaidan* in 2004. The other judges agreed with him on this point. It amounts to nothing less than an Alice in Wonderland approach to interpreting words. Mr Cowdery states quite carefully, as I set out above, that he wants judges deciding contentious issues "in accordance with the rules made by politicians". But once a bill of rights is in place, the judges will either overrule the politicians (as they do in

Canada or the US) or they will take those rules and they will read them in a way that they — the judges — happen to think is in keeping with something called 'fundamental human rights' (as they do in the UK and NZ). Heck, those same unelected judges are even prepared to tell us out loud that they will take the rules laid down by the politicians and they will read in new words, they will change the meaning of the words, they will ignore the intention of the Parliament.

So I can't help wondering what sort of limit on the power of judges Mr Cowdery pretends to be laying down when he talks of interpreting "in accordance with the rules made by politicians". Does he not know the latest cases coming out of NZ and the UK? If he thinks Australia's judges will somehow constrain themselves and not make use of the immense power bills of rights give them, he ought to tell us why he thinks that. Similar claims were made in Canada and the UK and New Zealand and all have thus far proved to be wrong.

I'll say it again. Most people who support bills of rights find the emotive power of the language of rights irresistible. They are attracted to the natural law trappings of them. They do not look at the outcomes that flow from these things. They do not even try to show that committees of ex-lawyers are better policy makers, better line-drawers, than elected, and accountable through elections, politicians. They simply cite the freedom of expression, as though writing those words down in a fine sounding document made them self-executing and as though such an entitlement were somehow absolute. It's not and never will or can be. There will inevitably be many, many tough calls to be made. In the 24 years of the Canadian *Charter of Rights* experience I would say that there is not one single case Mr Cowdery can point to, **not one**, in which the outcome was morally obvious or in which smart, reasonable, nice, fully

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Hollow Promise

Looking into the depths – of human imagination

Hollow Earth: The Long and Curious History of Imagining Strange Lands, Fantastical Creatures, Advanced Civilizations, and Marvelous Machines Below the Earth's Surface, David Standish, Da Capo Press.

At last it can be told: The Earth is hollow and, depending upon which vision appeals to you, it has limitless amounts of valuable goods, monsters ready to attack us surface dwellers, goddesses reaching to bring us peace, or flying saucers doing who knows what. The Earth being hollow or containing unknown realms below us, is perhaps not all that strange; after all, millions of religious believers think there is some sort of infernal region down there. There has been a scientific (but mostly pseudo-scientific) tinge to such beliefs, charted in *Hollow Earth*. With all the important concepts that have changed the world, Standish presents a book which he says “traces the cultural history of an idea that was wrong and changed nothing.” It is a story of curiosity manifested by science, but then changed in literature and philosophy in fantastic ways, a story that “weaves in and out of literature and what passes for real life, and veers into the charmingly delusional more than once.” Surprisingly, one era after another has taken this wrong idea and transformed it, continuing its appeal.

Beyond the religious ideas of the underworld, the workings of our planet's interior got their first scientific evaluation by none other than Edmond Halley, he of Halley's Comet. There is more to Halley than his comet; he had many scientific interests, and he was involved in getting Newton to write and think

about planetary orbits, of which Halley's own geological ideas were an outgrowth. Halley tried to explain variations in the magnetic poles of the Earth, why magnetic north indicated by a compass is not simply a line straight to the north pole but varies depending on where the compass is and how long it has been since it was last consulted. He was interested in understanding this, partly because it was of vital navigational and commercial interest. The variation, he explained in 1692, was caused by an inner globe, around which the surface Earth we know is only a shell. The inner globe held the magnetic charge, and turned not exactly in the same way the outer shell did. In fact, he said, there were a series of globes each within the other. In many ways, Halley's speculation was close to what we know now; the Earth does have a superficial outer crust and a solid and independent inner core, with the two being separated by a magma chiefly of liquid iron, and the flow of that liquid does create the magnetic fields. Halley went on, however, to say that his inner spheres could be populated by “animate beings” we could hardly imagine, deriving light from some source unknown.

Halley's scientific start included speculation that would be taken to extremes by “hollow earthers”, beginning with an original American thinker named John Cleves Symmes, who in 1818 broadcast to the world (starting with St Louis) his circular in which he declared that the Earth was hollow, and that it was open at the poles. He pledged his life to these truths and sought aid to go in exploration of the holes at the poles. Symmes was 38 at the time, and no one really knows how he got these ideas. Standish speculates that they



Rob Hardy, a US-based psychiatrist, is a regular reviewer for the Skeptic.

may have come from none other than Cotton Mather, who is better known as an arch-Puritan prig of the time of the Salem witch trials.

In *The Christian Philosopher* of 1721, Mather referred to Halley's ideas, mostly chuckling at philosophers who speculated about the Earth's magnet without reference to the true lodestone, which would lead them to their Savior. Mather did not, however, include any mention of polar holes, and although medieval mapmakers might have included giant watery vortices at the ends of the Earth, the polar holes were Symmes's influential contribution to hollow Earth lore. Symmes found many ways to support his ideas, such as migratory birds which were obviously heading for the warmer climes and abundant sources of food they could find once they entered the holes, or the driftwood that was found around icy coasts that gave every appearance of being tropical.

"Captain Adam Seaborn" was the author of a novel called *Symzonia*, but it was undoubtedly written by Symmes himself — prudent modesty since the captain praises Symmes's far-seeing ideas throughout, and accomplishes the sorts of adventures going down the holes that Symmes could do nothing but dream of. The novel seems to have been a model for all hollow Earth stories afterwards, including genuine literature like Poe's *The Narrative of Arthur Gordon Pym*.

Standish has summarized the hollow Earth ideas presented in fiction from Jules Verne's *A Journey to the Center of the Earth* and beyond the first Superman film, 1951's *Superman and the Mole Men*. Some of it sounds like worthy utopian imaginings, but most of it sounds downright silly. Standish has generously read even *Through the Earth* of 1898, "arguably the most boring hollow earth novel ever", and so we do not have to look at it ourselves.

The number of such novels dropped off in the twentieth century because polar explorations revealed no Symmes's holes, but Edgar Rice Burroughs set several stories in his underground world Pellucidar. Richard Shaver wrote strange tales of

robots and titans within the Earth, and these were adapted by Ray Palmer into the pulp magazine *Amazing Stories*, and caused a sensation. Poor Shaver, however, had a history of being hospitalized for paranoia, and believed that his stories were telling the truth.

Fantasy novels are one thing, but basing one's life and religion on the fantasy is another. Possibly the most peculiar person in this book which is full of peculiar people is Cyrus Teed, who through his religious alter-ego Koresh was able to inform the late nineteenth century world that not only was the Earth hollow, we were living on the *inside* of the hollow shell, not the outside, and the Sun and stars are somehow in the center. "To know of the earth's concavity is to know God, while to believe in the earth's convexity is to deny him and all his works." He demonstrated the concavity in ways that could most charitably be assessed as credible to those who believed in Koreshanity. For instance, an adherent to Teed's teachings invented the Rectilineator, a wood and metal device the size of a delivery truck by which a perfectly straight line four miles long could be formed, and bingo, the line dived into the ground just as it should have if the Earth curved hollowly upwards. Teed's followers were, for whatever reason, mostly women with Mrs in front of their names; perhaps they liked that he preached equality of women and a peaceful and chaste life outside the dungeon of marriage. They set up a utopian community in Florida, which had members as late as 1961, and the Koreshan Unity Foundation still gets the word out.

Hollow Earth notions prove to be a dreadfully wrong-headed idea whose time has never come but still comes repeatedly in various forms. It is a little disheartening to know that such a bad concept has continued to take hold of people's imaginations and pocketbooks; type "Hollow Earth" into a Google search, and you will get millions of hits, and few of them reflect the sort of high-minded but amusing view which Standish has taken in his valuable book. The flying saucer tinfoil-hat types have

signed on, as have the New Agers, and, if Standish's examples here mean anything, so will all the subsequent fringe groups.



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paid up members of the Skeptics might not disagree about the best outcome.

Those, like me, who say such moral and political issues should be resolved through voting (and not by abdicating them to unelected judges) are not stupid enough to believe that majoritarian democracy is perfect. It's clearly not. It has many apparent faults. It's just that it is better than any other system going, and certainly better than giving these decisions to a few ex-lawyers. Look back through history and you'll see that the tyranny of the majority pales into insignificance when measured against the tyranny of the minority.

One last technical point. Mr Cowdery uses the term "rule of law" in a very biased way. The term has various senses, but its most usual one conveys the sense of decisions flowing according to general rules, known in advance, and interpreted according to their regular, established meaning. Australia today, without a bill of rights, is clearly a rule of law country. If anything, bills of rights undermine the rule of law by killing off certainty and granting judges a license to interpret statutes in accord with their own "pipeline to God" moral sense. Of course various bill of rights supporters these days use the term "rule of law" to mean, "in accord with the outcomes we prefer and think most in keeping with human rights". That's a very different kettle of fish. Mr Cowdery might well have alerted us to his preferred usage.



Letters

Fluoride question

Peter Barrett
Woden ACT

I was interested enough in the comments about fluoridation in the last edition of *the Skeptic* that I decided to do a little research. Now obviously, as a layman in the subject, I'm somewhat limited in the documents I can get access to, and thanks to my daytime job, my research time is limited too.

But what I did find out has prompted me to ask some questions of those who oppose fluoridation. Accordingly, I was wondering whether Dr Diesendorf, and Messrs Edgar and Stevens would be willing to respond.

Dr Diesendorf:

Evidence has also emerged that fluoridation is largely ineffective in reducing dental caries, at least in permanent teeth...

The World Health Organisation says at point 6 of its article "Fluoride in Drinking Water":

Many epidemiological studies of possible adverse effects of the long-term ingestion of fluoride via drinking water have been carried out. These studies clearly establish that fluoride primarily produces effects on skeletal tissues (bones and teeth). Low concentrations provide protection against dental caries, especially in children. The... protective effects of fluoride... increase with concentration up to about 2 mg of fluoride per litre of drinking water [2 ppm]...

Would you care to comment on this document in general and these statements in particular?

Over the decades the scientific evidence of health hazards from the long-term ingestion of low doses of fluoride has increased steadily...

Could you please expand on this comment in the light of WHO's statement above?

...fluoridation is mass medication [which] violates the ethical principles that medications should be prescribed individually by your doctor...

If the addition of fluoride to drinking water is mass medication, does this mean fluoride which occurs naturally at about 1 ppm should be removed from drinking water? What about when it occurs naturally at levels of 0.1 to 0.2 ppm, as you say occurs in most Australian water supplies?

...skeletal fluorosis has been studied... at 0.7ppm in one Indian village... In its early forms it is virtually indistinguishable from arthritis...

What was the conclusion of the Indian village study? If skeletal fluorosis can arise at such concentrations of fluoride, shouldn't there be clear evidence of large scale skeletal fluorosis in communities which fluoridate at 1 ppm, such as here in Australia?

Skeletal fluorosis is a major public health problem in several countries where there are significant natural concentrations of fluoride in drinking water...

What sort of concentrations are we talking about?

A recent epidemiological study finds that boys exposed to fluoridated water... had a 5-fold increased risk of getting osteosarcoma, compared to matched controls...

What are the absolute rates of the cancer in the various groups?

...fluoride is a known mutagen in laboratory studies...

At what concentrations? According to the WHO linked above, this was so only at fluoride concentrations at or above 10 ppm, or 10 times its concentration in drinking water. Wouldn't this difference in concentration affect the test results?

Mr Edgar:

I have no brief against fluoride use to combat tooth decay... my ancestors are from the heavily fluoridated area of Carlisle (UK). Consequently good teeth good bones.

This appears to put you at odds with Dr Diesendorf who (as I quoted above) considers "fluoridation is largely ineffective in reducing dental caries, at least in permanent teeth..."

My experience is that if two arguments which oppose a position are contradictory to each other, both arguments are questionable. Do you agree with Dr Diesendorf's views?

...the aluminium industry's by-product...

Could you please provide evidence for the source of drinking water fluoride. And even if it's true, how does the source of the fluoride matter? What precisely is wrong with using a by-product of one process for another process? The only definitive statement I found regarding the source of fluoride was that it was a by-product of phosphate production, because the phosphate and fluoride were found in the one mineral. In that regard, it seems no more of a concern than the fact that some natural gas fields also

Letters

produce carbon dioxide which is collected and sold to soft drink manufacturers.

...compulsory medication of the whole population to benefit the few...

Can you clearly demonstrate a harmful effect of fluoridation upon you? If not, isn't it simpler to medicate everyone, knowing that this guarantees its benefits are provided to as many as possible? Even so, the WHO article linked above suggests the benefits accrue to more than "the few."

Fluoridation of the water supply is not cost effective. Estimates of water usage generally gives less than 7% to drinking by humans...

The fact that only 7% of the water provided to a community is actually drunk would only be part of the equation. My understanding is that the cost of fluoridation in large cities is less than \$1/person/year. In order to prove water fluoridation isn't cost effective, can you state the cost of providing fluoride by other means? Is it less than \$1/person/year?

It would be cheaper to offer free of charge fluoride tablets for all who desired them. So some would not take advantage of them? Far better that they should have that choice than the bulk of the people not being given the choice...

Which public health and safety decisions is it appropriate for individuals to make, and which should be made by the relevant experts? Why should fluoridation alone, out of a wide range of public health and safety issues, be subject to individual choice, especially when it's as specialised an issue as any other public health and safety issue? How well equipped are ordinary people to make informed decisions about it?

Mr Stevens:

...a late old Labour party stalwart once [warned] me... be wary of any scheme promoted by well-off people who say it will especially help the poor.

As skeptics, shouldn't we be looking at the evidence, not the motive?

Fluoride again

Geoff Sherrington
Donvale, VIC

Fluoridation of water supplies has a close cousin, chlorination of water supplies. Would Dr Diesendorf please write another paper for 'the Skeptic' in which he compares and contrasts the principles of chlorination and fluoridation of public water supplies?

How green was my house

Mark Lawson
Hornsby Heights NSW

Having read Paul Jones' very long two-part critique of attempts by myself and others to criticise aspects of greenhouse dogma, I find myself underwhelmed. For the problems facing the Greenhouse industry which he attempts to argue away still exist. Namely, that climate varies quite a lot without human aid and, because of that natural variation, plus the remaining enormous gaps in our knowledge of how the climate works, there is a very good chance that all the predictions of temperature changes pumped out by the likes of the Intergovernmental Panel for Climate Change are complete nonsense.

Certainly it looks as if climate will change, and perhaps some of the change may be due to human industrial or agricultural activity, or whatever, but by how much and in what direction is anyone's guess at this stage — although one would naturally suspect that temperatures will increase due to the increase in greenhouse gases. (However, as carbon dioxide increase has lagged previous changes in climate, not preceded them, I should not be so definite in any forecasts.) Otherwise we should put away the computer models and await events.

The main point of debate, at least as far as my article was concerned, is over the so called 'hockey stick' graph produced by Michael Mann, a clima-

tologist at the University of Virginia. This graph, from an analysis of ice cores and tree rings and the like, essentially shows the earth average temperature did not vary much for several centuries up to the industrial period, when it started to climb sharply.

Thus it contradicts a well established body of analysis in the growing field of paleoclimatology of a Medieval Warming Period (MWP) followed by a Little Ice Age (LIA) which is thought to have ended about 1850. Temperatures were up around modern levels in the MWP and well below current levels in the LIA (maybe a degree or so). This MWP-LIA variation, then, implies that some of the temperature increase which has caused such hand wringing of late may be due to natural variation — an implication which has been bitterly rejected by the Greenhouse industry. It is now known that the MWP-LIA combination was more of a Northern Hemisphere thing, although the effects were felt in the Southern. (For a good pro-Greenhouse summary of this see the Wikipedia article on Little Ice Age.) But that softening of the effect was not enough to get rid of the nagging, whining skeptics.

Enter Michael Mann's research which was eagerly seized on by the IPCC. The panel justified the fact that it cut across a substantial body of earlier research by claiming that the MWP-LIA variation was local — that is, mostly confined to the Atlantic. The trouble is that the variation is not local and the analysis was shown to have a major statistical flaw. Once that flaw was corrected the LIA-MWP sequence appeared.

Jones mentioned other analyses supporting Mann but does not give details. In any case, paleoclimatologists seem to have largely ignored Mann's work, and it is not mentioned in any of the more recent greenhouse agit-prop. (The IPCC still has it on its web site, however.) Instead the agit-prop has emphasised that there is a consensus among scientists. In fact I am surprised that there are any dissenters among scien-

tists at all, considering the reaction one gets by speaking out.

As for the computer models, well where to start. The problem is that no-one is quite sure what caused the MWP-LIA although variations in both solar activity and volcanic activity are likely candidates, combined with some sort of interaction with large scale ocean systems (major currents and so forth) and cloud cover, and throw in the kitchen sink. To produce predictions at our current state of knowledge strikes me as absurd.

The Greenhouse industry tries to counter such criticisms by pointing to graphs purporting to show a match between known temperature variations and computer predictions. Those graphs, however, mysteriously start at 1900 and end at 2000 (and the temperature line at 1900 does not seem to be coming from the right direction). The implication is that if extended beyond 1900 they won't show anything like the MWP-LIA sequence, although they might show a resemblance to the hockey stick graph. In other words the models are broadly stuck on the assumption that human activity is causing the warming and that's it.

I think the Greenhouse industry needs to face some unpleasant truths about the predictions it makes, or at least go back to the drawing board.

Greenhouse II

Graham P. Jackman
East Oakleigh VIC

I accept my ignorance of the precise details of the "greenhouse gas" debate and have always thought that it was a perfectly reasonable goal to reduce our use of fossil fuels, but that there seemed no really convincing evidence to suggest that global warming was a consequence of continued use. It also concerned me that those advocating changes were not those having to accept the costs of such changes. So I have been reading the recent articles by Paul Jones but have not found them convincing.

Coincidentally, I recently borrowed Michael Crichton's *State of Fear* from the local library, thereby doing my bit by requiring the printing of one less copy! If we ignore the "thriller" aspects, he does make what appears to be good points on the data being used in the argument and that we often have a touching belief in our ability to understand the environment. He also provides references, although Paul Jones does say that he often reaches conclusions different from those in the original papers.

I thought I should look at some of this data. I went to the NASA site on surface temperature monitoring at data.giss.nasa.gov/gistemp/station_data/ and as Crichton said, while major cities did seem to be warming, surrounding smaller sites often showed no change in temperature.

It is also disturbing to note just how patchy some of the data is. Paul Jones attempts to weaken Lawson's arguments on Vostok Ice Core temperature estimates by saying that if you overlay the temperature data with the carbon dioxide data, they show an amazing correlation with the CO₂ rise preceding the temperature by 800 years. This seemed to be good evidence if true, although I did wonder why. If it takes 800 years for the change to occur, why we should be worrying about the next century so much.

Paul Jones does not provide the data or a reference so I took a tour on the Internet. At www.daviesand.com/Choices/Precautionary_Planning/New_data such a graph is shown and does show an amazing correlation over 400,000 years. Unfortunately, it also points out that;

However, because of the difficulty in precisely dating the air and water(ice) samples, it is still unknown whether Greenhouse Trace Gas concentration increases precede and cause temperature increases or vice-versa — or whether they occur synchronously.

At cdiac.ornl.gov/trends/co2/vostok.htm a paper by Barnola, Raynaud, Lorius and Barkov states in the 'Methods' that because air bubbles in the ice do not close until about 90 metres below the surface, there is a

discrepancy between ice age and the age of the air in the bubbles. This appears to be believed to be anywhere between 4000 and 6000 years, emphasising the difficulty in correlating CO₂ and temperature measurements.

Somehow, all of this tends to leave me with a lack of confidence in Paul Jones' arguments. Sadly, taking the position that maybe nothing is going to happen that we can have any real influence on, is not newsworthy and nobody will take any notice. Maybe, next time I am asked to support any form of action on global warming, I should ask them to buy me a bike!

Sequestration

David Maddison
Toorak VIC

Those who advocate the continuation of carbon-based energy production propose that carbon dioxide so produced can be permanently eliminated by effectively burying it in the ground in either exhausted gas fields or other porous rock formations. The following brief comments will attempt to address why this is an unwise idea, indeed one that could lead to a great catastrophe for future generations.

Sequestered carbon dioxide must be stored forever — this carbon should never be released into the environment. This is impossible to guarantee over geological periods, and assuming civilisation survives, its unintended release in the future could have devastating results.

Sequestered carbon dioxide will ALWAYS be potentially harmful. In comparison, nuclear waste eventually becomes harmless in geologically short periods of time. In addition, nuclear waste occupies smaller volumes, by many orders of magnitude, and there are many more suitable sites for its disposal.

The mere fact that exhausted gas fields have held their contents for long periods of time is no evidence that they will continue to do so in the future. Firstly, it is likely that these fields

have lost some or most of their contents by natural processes over eons of time. The gas-containing volume is not truly hermetically sealed as may be supposed. Secondly, as gas is pumped out of fields the rock structure changes as it is no longer supported by internal pressure. It cracks and otherwise degrades. In addition, gas recovery is often enhanced by deliberately inducing cracks in the reservoir. Re-pressurising the field is not likely to repair this damage. Furthermore, there is no proof that once a field is filled with carbon dioxide, the plug can or will remain intact over the rest of time.

Most if not all gas fields contain water. The carbon dioxide will react with this water and create carbonic acid which may also weaken the formation.

A sudden release of carbon dioxide is extremely dangerous. In 1986 naturally accumulated carbon dioxide was suddenly released from the bottom of Lake Nyos, in Cameroon and more than 1700 people were killed, along with livestock up to 25 km away. This involved a much smaller volume of gas than may be sequestered from a typical power station. The potential for destruction by the accidental release of gas is tremendous. Furthermore, terrorists are a great risk to this technology. They could easily compromise the seal on sequestered gas, or cause a gas reservoir to be released before it is ultimately sealed.

Given all of the aforementioned problems it is difficult to imagine that there can be any strong case made for carbon-based electricity production with associated carbon sequestration. Further, there are few alternatives. Most "alternative" forms of energy are not of a sufficiently high energy density to ensure economic collection and distribution. Wind farming is environmentally destructive due to bird strikes, infra-sound and visual impact and does not work without subsidies. Solar cannot meet base load production requirements and is also expensive. There are limited hydro resources and these are currently almost fully exploited. Wave and tidal power is of limited application. The reality is that

nuclear power is the only technology that can compete on a similar economic basis to carbon-based electricity production and has fewer problems with disposal of its waste products. Short of returning to the stone age, if we decide to remain an energy-based civilisation, we must use nuclear energy. The carbon dioxide problem cannot simply be buried in the ground as is advocated.

In summary, carbon dioxide sequestration is poorly conceived, cannot guarantee sequestration of gas forever as is necessary, has potential for great harm due to accidental or deliberate release and is nothing more than a ploy by those who are not prepared to face reality and recognise the urgent necessity of developing large scale nuclear electricity generation, which ultimately has far fewer potential problems than sequestration.

Monty again

*Tom Biegler
Brighton VIC*

Readers will recall the vigorous debate on these pages, eventually terminated by our well-meaning Editor, about the Monty Hall problem. Monty hosts a game show in which there are three doors. One conceals the prize, a car, and the others are empty. Monty knows where the car is. The contestant picks a door. Monty then opens one of the other two doors. There is nothing behind it. Monty asks the contestant if she wants to switch her choice to the remaining closed door. What should she do?

As everyone knows by now, she should switch. The explanation is simple, to my mind at least. The probability is one in three that her first choice hides the car. So it is two in three that the car is behind one of the remaining pair of doors. Monty shows that one of those is empty, leaving the remaining one with that same two in three probability of revealing the car. The contestant doubles her chances by switching doors.

The raging *Skeptic* debate showed how hard it is for most of us to accept this solution in the face of common intuition, which tells us that switching is pointless because each of the remaining two doors should offer the same 50:50 chance.

In a recent discussion of the problem with a friend, he impressed me by suggesting a neat way of overcoming the resistance created by intuition. As it turns out, a search comes up with the same illustrative example in the excellent Wikipedia article on the topic (en.wikipedia.org/wiki/Monty_Hall_problem) but I still think it worth repeating here.

Simply increase the number of doors to, say, 100. Contestant picks a door. Monty proceeds to open 98 of the other 99 doors. They are all empty. Will the contestant switch when invited? I think most will. Intuition now has much less of a problem in coping. It is now easy to 'feel' that the very high probability of the prize being behind one of the 99 doors has been focused on the one remaining door that Monty kindly did not eliminate. And of course, 99 times out of 100 the car will be behind that door.

For your sake, dear Editor, I hope this does not start another debate.

Me too. Ed

Taxing Thoughts

*Dave Wilson
Humula NSW*

Recently, I was looking at the website for the Christian City Church, typical of many such ministries, located at beautiful downtown Oxford Falls in the fair city of Sydney. Now it's not enough that the self-promoting holy high-rollers of new age rock 'n roll Christianity (who are these people anyway?) need new premises to house their egos (and their flock), but they have to resort to their own brand of divine interpretation to glean a few extra bucks from their happy clapping followers.

In the FAQ's on matters donation, principally to their "Rise and Build" program, is this little gem:

Q. Is it acceptable to God if we receive taxation benefits from giving to Rise and Build?

A. Yes. This is a legitimate tax benefit approved by the Australian Taxation Office. God has provided this as a blessing to His people. It can also be looked on as providing the potential to give more to the Rise and Build program.

Well there you go. By their admission God himself blesses us through our taxation laws and no doubt guides the ATO with heaven-sent advice. The implications of this are enormous.

We all know that tax time is here again — what a blessing. I've just paid off my personal and business tax liabilities for the previous financial year — another blessing. That letter I received recently from our good friends with regards to a (my fault) discrepancy with the last IAS —Halleluiaah, more blessings.

On a more sombre note, if God directs policy on tax matters, then the clause at the bottom of most forms we have to sign ie, "severe penalties apply" etc, can only lead one to shudder at the consequences.

By the above statement it is apparent that God provides the potential for us to give more to the tax office as well. Maybe that's how one can find true redemption.

Well bless my BAS, on the very same website is a click-on prayer section wherein the willing can access prayers for today. One in particular gives consolation for those in 'financial distress'. Is this a joke?

It would be so funny if it weren't true that these financio-religious persuaders make a lot of money out of

spruiking their trade to their impressionable, mainly young, audience. Cold comfort for some poor soul who's just blown the budget by giving too generously to the likes of these individuals, only to be offered a few meaningless words of solace when the bailiff comes calling. It's nothing but fraud of biblical proportions.

They should all be packed off to Siberia where "all assets shall be frozen" So saith the Lord.

Band-waggon

*Brian Marsh
Perth WA*

In the first half of the twentieth century someone tried to explain how light travels, by suggesting that space was permeated by a medium which they called 'ether'. It was accepted by the scientific community for several decades until debunked by relativity.

Now, to explain things made impossible by the Big Bang hypothesis of the beginning of the universe, they have invented a new concept of space. It is now a sort of container or bag which inexplicably expands and drags the universe outwards with it. It makes it unnecessary to try to explain how the matter and light generated by the Big Bang can expand outwards against the gravity of an infinite mass. It makes it unnecessary to explain the impossibility of the other Big Bang invention, inflation. If the Big Bang was an explosion, the velocities imparted by that explosion could not have increased but to explain some of the unexplainable of the Big Bang it was necessary to claim that velocities were much greater for a short period after the bang, and that spurt of speed was

called 'inflation'. So space was invoked as the enabler.

Once upon a time space was the emptiness around us which was occupied by all the galaxies, matter and radiation of the universe. It had no qualities, it was nothing. Now it is finite with some sort of fabric which holds the items of the universe in place and keeps them in their proper spacial relationships while it pulls them outwards. And, what is outside that? That nothingness which used to be called space now has no name. Can anyone describe space as it is viewed now? Is it any more real than the old ether? What are the forces and functions which enable it to hold matter in the way that is claimed?

The things that enable continuation of things like this and the old idea of 'ether', are called band-waggon. People get onto band-waggon because thinking is not necessary. band-waggon exist in all disciplines and they corrupt science. Take DDT for instance. Rachel Carson, the original Greenie, used a bit of dishonesty and misquoting of Dr Schweitzer, to brand DDT as a despoiler of the environment. Millions of people got onto the band-wagon and DDT was outlawed. Now tens of millions of unnecessary deaths from malaria and insect borne diseases occur each year. It has been shown that research showing DDT to be a pollutant was suspect, (ref DDT: A Case Study in Scientific Fraud; J.G Edwards Ph.D. *Journal of American Physicians and Surgeons*, V9 No3 Fall 2004) and yet the conservation band-wagon will prevent its use no matter what. So the deaths will continue.



Deadlines for contributions are:

Autumn – February 1

Winter – May 1

Spring – August 1

Summer – November 1

Requests for Assistance

Skeptical material wanted

The WA Skeptics are collecting classroom material relevant to critical thinking at secondary school level. When ready, this material will be posted on the Skeptics website for use by secondary schools throughout Australia.

We invite all skeptics to help with this important project, especially skeptics who are school teachers (according to the occupations disclosed when subscribing, about 1 in 20 subscribers are school teachers). We already have enough material to make a start but need more.

Skeptics with ideas or material they could contribute, or who would like to receive draft postings for improvement, should contact the WA Skeptics.

WA Skeptics
PO Box 431
Scarborough WA 6922
Tel: (08) 9448 8458
happs@istnet.net.au

Skeptical ideas for philosophy teaching

A little known fact, even in Queensland where it is taught, is that the Queensland Studies Authority (QSA) offers a subject in secondary schools called Philosophy and Reason (PAR). This subject has been around for about 30 years under the name of Logic, but has always had less than a dozen schools taking it up, because even though most people like the course, few teachers are trained in the content. The subject has three strands: Deductive Logic (which is basically formal logic), Critical Thinking (with sections including Fallacies of Reason-

ing, Inductive Reasoning, etc.) and Philosophy. While some teachers are OK with Deductive Logic, often offered through Mathematics courses, they might struggle with the Philosophy component. In the same vein, those comfortable with Philosophy might not feel competent in the Deductive Logic strand. So it has been for a long time.

The name change from Logic to Philosophy and Reason has drawn much attention recently, and we look to be expanding quite quickly. This is greatly assisted by the fact that the University of Queensland has structured a Graduate Certificate course tailored to those wishing to teach the subject, and that teachers now progressing through the Bachelor of Education course (also at UQ) may choose Philosophy as a teaching area. The framework is in place to expand this subject significantly.

Interestingly, about half of our teachers come to the subject with a Science/Mathematics background and half from a Humanities background (with a smattering of Law — contributed in part by my good lady wife, also a PAR teacher).

I have put together an email group with the terminally cheesy name of 'PAR for the Course', which includes all current teachers of the subject in Queensland, the UQ lecturer with which we work (Dr Dominic Hyde) and certain QSA officers. Through this group we exchange and disseminate teaching resources, cartoons, media articles (particularly those exhibiting fallacies of reasoning — God bless *Letters to the Editor*) and the like. I'm also putting together a CD of video and other resources with bits like Monty Python's Argument sketch, etc. There is also a web site on the way.

Obviously Australian Skeptics has played a role in bringing to light a great range of material for the class-

room, particularly in the strand of Critical Thinking. It was with this in mind that I approached Barry Williams and asked what else was happening around the country in this area. Barry has mentioned that WA skeptics have asked the same question and are currently building and asking for resources. I would be keen to connect with those doing this to help coordinate an approach across the states. I would also love to hear from Queensland Skeptics who would like to contribute material, time, or services to strengthening the teaching of rational thinking in our schools. I haven't yet hooked up with Queensland members, but I'll get to the sessions at the Red Brick hotel as soon as I can.

We have adopted *Cognite Tute* as our unofficial motto ("Think for Yourself") and might even degenerate into having this on T-shirts and caps if we don't find help soon.

Peter Ellerton
QSA State Panel Chair
Philosophy and Reason
Head of Curriculum
Calamvale Community College
Brisbane QLD
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Other readers, particularly those involved in education, seeking assistance and advice from fellow Skeptics are invited to send us details of their requests.

The Editor



National Convention

Science, Truth and the Media

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