

the skeptic



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A JOURNAL OF FACT AND OPINION



HELEN DALE
CONTROVERSIAL
AUTHOR SPEAKS
OUT - EXCLUSIVE

ID SLAMMED IN US CASE

FLUORIDE, TEETH AND
GREENHOUSE GAS - THE FACTS

MESSAGES IN BOTTLES AND
FACES IN FOOD - THE MYTHS

RIGHTS, WRONGS AND SHAME

NUTRITION: FOOD BEATS PILLS
EVERY TIME

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25 Not Out

A significant milestone has just been passed for *the Skeptic* — 25 years in print and still going strong. Beginning as a four page tabloid sized newsletter, the magazine has evolved through several manifestations into the excellent journal we have today. These snapshots of various covers will underline just how much we have changed in appearance, but the changes in content have been even more significant.

Among the reasons why we have been so successful has been our willingness to explore issues that fall outside a strict interpretation of what many consider to be "Skeptics business". Our readership is an intelligent one, with a wide and diverse range of concerns, so our intention has been to cover the broadest possible selections of topics that we judge will be of interest to at least some of them. Too close a focus on too narrow a field is bound to lead to repetition and, ultimately boredom.

The feedback we get from you, the reader, suggests that we have been selecting fairly wisely. Not everyone is interested in every subject, but that is only to be expected. The fact that your compliments greatly outnumber complaints (apart from being good for the editorial ego) and the fact that our resubscription rate is very high, testifies that we have been getting the balance about right.

Another factor is that we have consciously avoided allowing *the Skeptic* to become narrowly partisan in political, religious or philosophical terms. In *the Skeptic* you will read articles that might well indicate the personal biases or convictions of the authors, but as long

as they steer clear of fundamentalism or fanaticism, then we are happy to publish them. Publication does not equate with endorsement of the ideas expressed, only that we consider them worthy of consideration.

Contributors do not have to adhere to the "Skeptic party line" because there is no party line. Skepticism and dogmatism can not cohabit harmoniously; Skeptics are generally more likely to be pragmatists. Skeptics come in all manner of guises, and it would be surprising indeed if all of them hewed to any particular ideological or philosophical line, and we are not prepared to alienate up to half our potential audience by being pig-headed followers of fashion. (We have even heard that there are some Skeptics who don't like cricket, which simply shows how much of a broad church (sorry) laboratory we have.)

Above all, we believe that by maintaining a sense of humour and by not taking ourselves too seriously, we stand a far better chance of winning both converts and arguments, than by appearing as a bunch of whining jeremiahs or naysayers.

Enough of the self-congratulatory rhetoric. We've had fun producing *the Skeptic* for a quarter of a century and by your continued support you seem to agree with us. You will find many fine articles in the issue to stimulate you and some that might surprise or even infuriate you. We wouldn't have it any other way.

Barry Williams



Around the Traps

Get well soon

We have heard that the amazing Skeptic, James Randi, had heart bypass surgery in early February. According to reports from his friends in Florida, Randi is definitely on the road to recovery, cracking jokes with his doctors, and though he still has a long recovery ahead of him, he's started on that road.

James Randi is one of the most prominent figures in the Skeptical world and has visited Australia several times, appearing at a couple of our conventions. Because of his uncompromising opposition to fraud and charlatanry, he has attracted the ire of a number ill-wishers, but we have no hesitation in awarding him the ultimate Australian accolade — he is a Good Bloke.

Get well soon, old mate, the thoughts of all Sceptics are with you.

Money for (scam) jam

We were astonished recently to hear that the Queensland Police, having decided to follow up with some 25 people who had fallen for a Nigerian Letter scam, found that among them they had sent around \$7 million to Nigeria in pursuit of the ephemeral millions.

There can scarcely have been any scam that has received more publicity over the years, so what on Earth would predispose anyone to believe that a stranger, of whom they had never heard, from a distant country, would decide to give them millions of dollars for no particular reason at all?

More surprising, among those stung were “lawyers, professors and financial planners” — not necessarily the first professions that spring to mind as hotbeds of gullibility or stupidity. Could a lawyer not know that what he was paying for was illegal under any system? Could anyone a passing acquaintance with finance not know that getting something for nothing is a very rare occurrence indeed? What subjects does that professor profess?

Sadly, it would appear that naked greed degrades the critical faculties at a rate hitherto undreamed of.

Change or bloody revolution?

Once upon a time, a group of merchants in a wide brown land set up a body which they called the Creation Science Foundation, whose purpose was to peddle fantasies to children and adults alike. Sadly, as their creation contained no science whatsoever, the foundation eventually foundered on the Rocks of Reason.

The intrepid band then changed their name to Answers in Genesis, which had the virtue of not misusing the word “science”, at least not in the name. Now while useful answers might be found in Genesis by someone competing in *Mastermind*, with a special subject, the *Book of Genesis*, it is neither an historical nor a scientific treatise. Indeed the venerable volume is singularly deficient in wisdom on either subject. Undaunted, the merchants continued to peddle their fantasies as though they were really truly true. Moreover, they even went into the export market, peddling fantasies far and wide, indicating that Phineas T Barnum was on to something with his observations on the birth frequency of suckers.

Still, evolutionary pressure will not be denied, and we recently learned that yet another mutation has occurred and henceforth the body will be known as Creation Ministries International. These examples of nomenclatural fickleness, confusing enough to the casual observer, must present a real puzzle to the faithful followers of the fantasy mongers, given that intellectual acuity is not a prized attribute among them.

However, reading between the lines, it seems the most recent change might not necessarily have been the result of entirely amicable discussions. It would appear that the US colony, like

its historical predecessor in the 18th Century, rebelled at control from the centre of the empire and declared its independence. It appears that the AiG web site was developed and hosted in the USA, while (as the local HQ release claimed without even the suggestion of a blush) the “intellectual content” derived from “scientists’ and “thinkers” from the “parent corporation”. We have not yet heard from the rebel HQ.

Pitt the Younger or Thomas Jefferson couldn't write satire like that.

Musical treat

Those who attended the National Convention in Canberra in 1998 could hardly forget the amazing musical performance during the Old Parliament House dinner. Performed by Richard Milner from the American Museum of Natural History, in New York, it was entitled, *Charles Darwin, Alive and in Concert* and featured many clever G&S-like songs of Richard's devising.

Richard had a CD made of his performance and a revised version, with some new songs, is about to be published. We have asked for details and costing and hope to have it available for sale on our on-line shop within a couple of months. We'll keep you posted.

Intelligent Dinner

For several years the NSW Skeptics have been conducting Dinner Meetings at the Chatswood Club, where like-minded people can get together, enjoy each other's company and listen to interesting speakers. At the most recent dinner, more than 180 turned up to hear our president, Martin Hadley, a barrister, ABC Religion Unit broadcaster, John Cleary and palae-

ontologist, Dr Alex Ritchie, discuss the legal, theological and scientific implications of the recent Dover, PA court case on the Intelligent Design movement. The consensus was that whatever spin is applied to ID, it remains a religious belief with no scientific support. Martin's explanation of the Dover case is later in this issue



Presidents on parade

The occasion, incidentally, was one at which all four individuals who have presided over NSW Skeptics in its 25 years, were present. The photo of this curious conjunction, above, given the expressions on the faces of Messrs (L to R) Gordon, Hadley, Saunders and Williams, possibly has something to say about the burdens of incumbency compared with the relief that comes from retirement.

Future functions

Future dinners will be held on May 27, July 22 and September 9. No speakers have yet been confirmed but we will advise Sydney subscribers when we know; they should also keep an eye on Up-coming Events on our site. Our intention to hold the next dinner on May 13 has been changed because it would have clashed with a magic Night at the nearby Zenith Theatre. As Skeptics love magic shows we don't mind giving this one a plug, More details from Sean Taylor's Magic Shop web site www.taylormagicshop.com.

Feeling the pinch?

Apropos the ID movement, news coming from the USA should give some heart to those of us who believe that science is a better method of explaining the natural world than religious dogma, no matter how much the latter is clothed in scientific sounding terms. As a wise old sage once said, “You can dress a pig in a pinafore, but it's still a pig underneath”.

It seems that Judge Jones not only demolished the arguments of the members of the school board, and their supporters, who sought to undermine science teaching, he also awarded costs against them. This somewhat unusual in US courts, certainly more so than in Aus-

tralia. It's ramifications, however, have been quite profound. A number of other US states and districts that had been contemplating introducing regulations similar to those in Dover, have subsequently withdrawn them. While rational argument usually has no effect on closed minds, it seems that the hip pocket nerve is much more sensitive.

Departed

We note, without comment the death in the USA of Henry Morris, founder and leader of the fundamentalist sect that perpetrated the anti-science fiction that became known as creation ‘science’.

Bunyip

The Hand Behind

The Hand that Signed

For the first time, the central figure in a literary cause célèbre tells her side of the story.



Helen Dale (nee Darville) graduated LLB with First Class Honours in December 2005. She is currently Associate to a Queensland Supreme Court Justice.

Photograph courtesy Office of Media and Communications, The University of Queensland.

Three stories

1. It's high summer; I'm 14, walking home from school. Sweat is pouring down my face and I almost miss it. There's a furniture truck parked in the street outside my house. My first thought: *oh shit, he's done it again.* When the family lived up north, dad's standard operating procedure was *put the stuff on tic, then move before the debt collectors arrive.* My siblings went to a jumble of schools as dad dodged the tallyman around Far North Queensland. One brother had eleven schools in two years.

This got harder once we shifted to Logan City, a sprawling outer-suburban development outside Brisbane. We'd see the furniture truck then — the collectors were starting to wise up, maybe by keeping better records. We'd be minus a telly, washing machine, stereo and bedroom furniture for a month or two; then dad would start the process over again. After one particularly keen lot turned up in a white van with the words COLLECTION AGENCY painted on the sides, kids at school started saying my old man was a 'bum' and a 'gaolbird'.

2. It's the end of year two, and I've failed to learn anything. Every time I write my name, it's spelt differently. I spend my time at the back of the class manufacturing spitballs. I'm the archetypal holy terror, the kid who gives teachers blood pressure problems and makes them leave the profession. I'm an expert at both the funny (chewing gum on seats) and the macabre (massive stick insects hidden in the teach-

er's desk drawers). On my report card, one young woman — first year out of teacher's training college, equal parts terrified and fascinated by her proletarian charges — writes, 'this child will never amount to anything'.

Some time later, I learn I'm dyslexic, and mum waits tables and cleans rich peoples' houses to pay for one-on-one phonics tuition and occupational therapy. To this day, I've never really figured out how it worked, but it unlocked whatever was locked between my ears. I can still remember the eerie sensation of going from the bottom to the top of the class inside six months. *Flowers for Algernon* scared the bejesus out of me; I was worried the process might be reversible.

3. I'm in my second year of law school, and Suri Ratnapala, the eccentric genius who teaches us Constitutional Law A sets *Polyukhovich v Commonwealth*¹ as our case study. *Are you trying to set me up?* I ask him after class. *No, he says mildly, I'm trying to teach you that in this profession, thinking is actually a good thing.* I read the case, and find Brennan J saying things that get other people accused of anti-Semitism:

*The Act select[s] a specific group of persons from a long time past out of all those who have committed, or are suspected of having committed, war crimes in other armed conflicts.*²

1. (1991) 172 CLR 501.

2. At 554.

If the rule of law is based on general laws, impartial in their use of coercive power and supreme over all,³ then the danger posed by legislation that targets an unpopular minority is readily apparent.⁴

I pour years of careful thought into that essay: the rumination that comes at night after copping a daily critical barrage. *What if I'm completely wrong? What if people are right to ring their media mates up and make sure I'm not published again? What if we should prosecute these sleazy fucks, who hopped out to Australia after the war and just starting working on the Snowy, because that was deemed a Good Thing?*

Brennan J's magisterial judgment knocks me sideways. I've read only history and literature on this issue, never the law. I see a High Court split 4-3, with the sort of judicial blood-letting reserved only for the most famously disagreeable cases. Think *Wik*. Think *Bank Nationalisation*. I humbly learn Professor Ratnapala's lesson. *Thinking in this profession is actually a good thing.*

Writing

Law is much more fun than writing, but it took me six years to learn that.

I've included the three stories above to make a small but important point: I haven't lost the knack. Writing remains as easy as it was when I was twenty and producing *The Hand that Signed the Paper*. These snippets, although 'true', also employ the inevitable compression and scene shifting that characterises fiction. The year two teacher made the 'never amount' comment to mum's face, rather than on paper. Professor Ratnapala gave us a choice of cases — half a dozen or so. *Polyukhovich* was only one. Memo to my critics: moving the furniture is a consequence of crafting and making. Even non-fiction writers do it.

I became one of those strange law students who took great pleasure in

Property, Equity and Trusts, the Law of Companies and of Copyright. I'm heading towards a career in Commercial law, to debt and equity markets, capital raising and tax minimisation. It fascinates me and I'm good at it. I'm annoyed I spent all those years trying to join in literary Australia's closed conversational circle when I could have played the stock market or developed a property portfolio.

History

In 1995, I won the Miles Franklin Literary Award for my first novel, *The Hand that Signed the Paper*. I was 23. I wrote the book when I was 20 and 21, winning *The Australian/Vogel Literary Award* for it at 22. This prize, for unknowns under the age of 35, carried with it a substantial lick of prize money and guaranteed publication. I couldn't believe my luck. It also went on to win the Australian Literature Society Gold Medal.

Despite having a good English degree, my speciality was languages and grammar, not the sort of stuff destined to make me savvy about publishing and marketing. I knew nothing about how Australian literature worked. Marcus Westbury, an unusually perceptive critic, commented that I came from so far outside the establishment I didn't know we had one.

I'd already decided I was going to write under a pseudonym. This had been formalised with the university, which issued my degree parchments and university medal in both names. It's always a source of amusement to me that the *Courier-Mail* had received a press release from the university, listing all the university medallists for 1994, early in 1995. My award was under both names, and a brief profile included my *Australian/Vogel* win. Come August 1995, the *Courier-Mail* made much of the 'investigative journalism' involved in blowing my cover.

I hadn't intended the pseudonym to hold for very long. It was designed to last until my main source for the novel died. At the time, he had terminal bone marrow cancer and six months to live. I promised him that he wouldn't be prosecuted under the War Crimes Act on my account.

Shortly after I won the *Australian/Vogel* Award, his cancer went into remission and faced me with a real quandary. I decided to keep the pseudonym, although came perilously close to letting my publisher in on the secret. I only stopped from doing so after receiving an absolute stinker of an editorial report. It accused me of racism and called my novel propaganda and a pornography of violence. They would not divulge the editor's name to me, only sending a photocopy of her report and refusing to answer questions when I rang. In a fit of immaturity, I figured that two could play that game. I tore up my half written letter and binned it. If a custard pie hits me in the face, I figured, it'll get you lot as well.

Even so, I couldn't work out how a book that had unanimously won a major literary award was suddenly a piece of junk. Sure, there were prize-winning books around that weren't my cup of tea, but that didn't make me hate them (or their authors). I'd simply put that book aside and read another. This principle held true for computer games, RPGs and various sports. An editorial report riddled with invective was my first inkling of the ridiculous pretension and self-importance with which many Australian intellectuals view their role.

Australian literature is burdened with a level of ideological conformity that would do East Germany proud. I started out in life as a leftie, albeit an idiosyncratic one — Trotsky to their Stalin, for want of a better analogy. I found myself appalled — and still am — at the anti-Americanism, the pro-Jews as victims but anti-Jews as victors, the belief that only someone from a given gender or ethnic group can write about that gender or ethnic group, and much other ideological piffle. I remember being told with great solemnity at a writers' festival that white people who wanted to write about Aborigines needed to ask Aboriginal permission in order to do so. I nearly had chronic convulsions trying to stifle my guffaws. Watching kindly and well-meaning people attempt to apply affirmative action to literature frightened me, especially when they were dishing out Australia

3. S Ratnapala *Australian Constitutional Law: Foundations and Theory* (2002), 8-9.

4. H Roberts, 'Retrospective Criminal Laws and the Separation of Judicial Power' (1997) 8 (3) *Public Law Review* 170-185, 180.

The Hand Behind

Council grants. It struck me as inconceivable that critics and academics were trying to control authors' output. It was an insidious form of censorship and needed to go for six at the MCG.

So I threw myself into 'Helen Demidenko' with gusto. I'd grown up with plenty of people from that sort of background and had a knack for languages, which made me a natural mimic. Unfortunately, the nasty editorial report — coming as it did so early in the publication process — had a knock-on effect in other respects. When my old high school attempted to take some credit for my achievements, I rebuffed them with rudeness and contempt. This was despite the fact that I'd had some good teachers there, including one who strongly encouraged me to attend university, something I may not have done otherwise. I viewed the school through the jaundiced prism provided by some of its students. My response was very unfair to the teaching staff, something I only realised later.

My journey through the upper reaches of the chattering classes as 'Helen Demidenko' was surreal. I'll never forget being propositioned by both halves of an 'open marriage' at one function, or being invited to join the 'Anti-Football League' at another. Instead of being honest and pointing out that no, *I actually like sport*, I made a lame duck excuse about having insufficient money on me to join. The conversation forgotten, I fronted up to a panel next morning wearing a 1991 Wallabies jersey. The two sport haters were sitting in the front row and I copped an A-grade glare.

Members of the chattering classes took potshots for the moral ambiguity of my writing. Part of me wanted to shout at the top of my lungs if they'd ever read Céline. I watched stunned as Peter Craven wrote a positive review of my novel in *The Age* and short-listed it for one of the Victorian Premier's Awards, only to dump on it when the Melbourne literary establishment decided I was *persona non grata*. People who were supposed to know about literature went all out to conflate my views with those of my characters (*does that make Bret Easton Ellis a serial killer in his spare*

time?) and prove that I must have had some sort of sneaking association with the League of Rights (*who are they?*). This made me determined to humiliate a group I considered spineless, and my invented persona became ever more over the top. It was only a matter of time before my cover — such as it was — was blown.

Narrative

Let me begin with a girl, an ordinary Australian girl.

Fiona Kovalenko has an enfeebled, elderly uncle. She also has a less enfeebled (but still elderly) father. This besides the usual number of siblings, aunts and cousins. Fiona Kovalenko is at university, but unlike many of her peers is not particularly articulate. She is clever, but her cleverness does not extend into the realm of wisdom or reason. This is not because she is intrinsically incapable of these things but because she is only nineteen years old. Within her, this ordinary Australian girl carries a story incomprehensibly horrible yet eminently describable.

Fiona has known since childhood that three members of her family, a loving, close-knit immigrant Ukrainian family, were to greater or lesser degrees Nazi collaborators. She is unaware of the full import of the phrase 'Nazi collaborator,' is versed in neither the specific history of this collaboration nor in the history of collaboration *per se*. Instead, Fiona chooses to get by, largely unknowing. Missing the odd lecture. Not studying too hard. Living in one of Brisbane's riotously tropical suburbs near the university. She smokes rollies and drinks hot chocolate. She listens to nightly current affairs bulletins and tut-tuts over the state of federal politics with her flatmate. It is only when one of her family members becomes a feature on those current affairs bulletins that she faces — is forced to face — the narrative of collaboration within her family. Her uncle is charged with war crimes, and that is news.

Australia — like many other western countries during the mid-eighties to early nineties — introduced legislation designed to allow the trial of postwar immigrants who were ac-

cused of collaboration with Nazi occupiers in eastern Europe and the former Soviet Union. The debate that attended the legislation's passage through federal parliament was one of the most acrimonious in recent Australian political history.⁵ Significantly, the intended targets were seldom German. Those who fell within the ambit of this legislation were immigrants from Eastern Europe (Ukraine, Lithuania and Latvia, for example), nations and peoples with grievous histories of oppression and genocide of their own. It is within the framework of this legislation that the fictional narrative of *The Hand that Signed the Paper* unfolds.

Fiona Kovalenko strives to own what she sees as her past, terrible as it is. Her older sister, organized and pragmatic, engages a lawyer and plans familial court appearances. For Fiona's sister, Natalya, there is no doubt that loyalty resides with her family, protecting it from those who seek to do it harm. The past, for big sister, has no business haunting the present.

Fiona is neither as pragmatic as her sister nor as sure that her uncle should be protected. She has no idea how to begin the process of historical ownership so she simply asks questions. In their turn, father, uncle and aunt are badgered for narratives in a large yet intimate exercise in oral history. Sometimes Fiona interrogates the terms of these familial narratives, inserting her limited, young, late twentieth century ways of seeing. Sometimes she simply transcribes their narratives word for word into one of her big spiral notebooks. She neither judges her family nor sees her uncle as inherently evil. Implicated by her bloodtie to the accused, she simply sets the story down as it comes to her. In fragments. Compassion cheek

5. For a discussion of the debate in Australia see Mark Aarons *Sanctuary: Nazi Fugitives in Australia* (1989). For a more wide-ranging discussion, covering in detail the Canadian, US and British experience with such legislation, see David Cesarani *Justice Delayed: How Britain became a Refuge for Nazi War Criminals* (1992).

by jowl with murderous indifference. Hope commingled with despair.

For Fiona, the received narrative of Nazism — as distinct from familial narratives of Nazi collaboration — is constructed wholly by the media of television and cinema. Apart from her family's collection of fading black and white photographs, Nazism and its cruelties could just as easily be an episode of *Australia's Most Wanted*: history based entirely on televisual re-enactment. She writes. She struggles to comprehend, but the only illumination available for her to cast on her narratives is television's 'cold, cathode light'.⁶ Her understanding of clarity is simply to make her narrative as cinematic as possible. If she is influenced at all beyond televisual reconstruction and appropriation, it is by trial reports that show how such-and-such a serial killer seemed the embodiment of normality to his neighbours.

The brutal, unseeing antisemitism that drove her uncle Vitaly to collaborate is scored across the narrative Fiona transcribes and inscribes. This narrative blames Jews within the Communist Party (and Jews *per se*) for the Ukrainian Famine of 1932-34. Vitaly describes an existence shattered by Communist and Nazi barbarities into the bleakest of Hobbesian fragments: truly 'solitary, poore, nasty, brutish, and short'. Fiona's aunt Kateryna, as bigoted in her own way as Vitaly, remembers Babi-Yar because she slept with handsome Hauptsturmführer Hasse, a man behind the butchery, in a nearby hotel. Vitaly liked Treblinka. During his time as a guard there he was warm and well fed. He 'never falls psychologically outside the atmosphere of his age'.⁷ Fiona's retelling means that she revisits — vicariously — a world where people are hermetically sealed inside the cruellest of closed systems. Since I'm uninterested in turning people into bug-eyed monsters, I took great care to make my one-time concentration camp guards recognisably

human, even sympathetic. Their anti-Semitic motivations and values had substance. That said, I didn't shy away from what they did. It's just that to me, Osama is much more interesting if we know what makes him tick.

The language of Fiona's familial storytellers is hateful and vicious. Fiona is an ordinary Australian girl, and for many years the language of her Australia has been neither hateful nor vicious. Fiona believes people can become Australian. If they 'do the right thing' (a slogan prominently displayed on municipal rubbish bins) in the new land, they will be rewarded with Australianness and all it entails. Fiona believes that becoming Australian means entry to an ordered polity, the rule of law and a public discourse set free from modalities that reify viciousness and hate. She can respond to the brutalities of history only in terms of lawyers, parliamentary debates and letters to the editor. This is her Australian world. Fiona comes to accept the ideal of a migratory rite of passage that reifies history but in so doing detaches it from its terrible consequences. For Fiona, immigrants shed the evils of the old country like a snake sloughing off dead skin, remaking themselves in the new country. They cross an invisible line drawn at an arbitrary point somewhere in the Indian Ocean, ceasing to be emigrants, becoming immigrants instead. 'I've worked so hard to be Australian,' Vitaly tells her. 'I'm all Australian now'.

Media

Journalists have a remarkable talent for behaving like kiddy-fiddlers. At least, that was the view I formed after they repeatedly staked out my parents' house and followed my primary school aged niece and nephew to school. There were so many of them — OB vans, TV cameras and sound booms in tow — I had to sneak into mum and dad's backyard via several neighbours' fences, wearing dog bites and bee stings in the process. Mum was petrified — they'd been prowling up and down the verandah trying to photograph her through her bedroom window — and dad wanted to get his

gun. Dad's habit of getting involved in petty crime was another source of worry. On one occasion a Channel 7 reporter doing the rounds realized who dad was and tried to assemble a TV crew outside the Magistrates' Court after he was convicted. Quick thinking on the part of the duty solicitor stopped an already nasty story becoming much worse.

The phrase 'chequebook journalism' hadn't held any real meaning until one media outlet offered me \$160,000 for an interview — after a rival offered \$100,000. At the time I knocked it back, a decision I now regret. My head was full of high ideals, including 'maintaining my integrity as a writer'. In reality, there's not a great deal of difference between accepting a wad of cash from a media outlet in return for telling them what they want to hear and hanging off the taxpayers' teat in return for telling the government what it wants to hear. I still maintain the press hammered me as hard as they would have done had I taken the money.

I learnt that nearly every journalist fancies himself as a writer, complete with novel stashed away in the attic/garage/trunk. Similarly, their collective certainty that Australia is populated by a mob of racist dills knows no bounds. Every time some media commentator tees off at 'regional Australia' or 'the outer suburbs', carrying on about ignorance, racism and lack of sophistication, I take it pretty personally. Not so long ago that was me. It's still my siblings, all of whom are tradespeople. Many journalists also believe they can influence the outcome of everything from literary awards to elections, hence the concerted campaign to have me stripped of the Miles Franklin Award. This culminated in accusations of plagiarism, another thing that wasn't worked out of my system until law school — when I earned a high distinction in Copyright law. Fortunately, Dame Leonie Kramer — one of the judges — was made of sterner stuff, and told them to piss off (in the nicest possible way, of course).

Only the sports journalists were appropriately humble, acknowledging the gap between their efforts and

6. See William Schaffer 'The Book that Evaded the Question' (1996).

7. A phrase coined by the literary critic Georg Lukács.

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those of Australia's sportsmen and women. I think Gideon Haigh is the best writer in Australia: a fine craftsman, aware of his limitations, devoted to his sport. One of the few highlights of my literary sojourn was meeting him and receiving a signed copy of *Mystery Spinner* as a gift.

A sure sign that many of Australia's critics and journalists don't have a life was the appearance — in rapid succession — of four books about the *cause célèbre*. All were longer than my novel. Robert Manne's *The Culture of Forgetting* came in at nearly twice the length, riddled with errors and laced with bile. He sent a letter begging an interview shortly before publication. My solicitor read it and shook his head sagely. 'Don't touch this one, Helen. He's already made up his mind'.

Reluctantly, I cooperated with Andrew Reimer in his effort, *The Demidenko Debate*. My publisher was behind the book and Professor Reimer had consistently argued that my novel was good, despite the controversy. We met in my solicitor's office in the city and I tried to answer his questions. At this point, I really noticed that I just didn't fit into 'literary culture'. He was passionate about literature in a way I couldn't fathom, speaking about it as though it had the capacity to change the world. It's a novel, I kept thinking: what people read on the train. We were talking at cross-purposes. Whatever I said obviously wasn't too inspiring — he didn't use a single quote in his book. Although he was kindly and well meaning, I spent most of the interview trying to ignore the really impressive accumulation of plaque on his teeth and his constant fiddling with a cigarette packet in his pocket. As soon as we stepped outside, he lit up.

Work

Mark Davis' study *Gangland: Cultural Elites and the New Generationalism* told me — in very precise terms — why I wasn't able to work as a writer in Australia. Before Davis' book came out, I already had a fair idea of what was going on. Davis' research simply confirmed what I suspected. The 'wall out' ranged from attacks in the press

that a wealthy person would be able to fight off with a defamation suit (one commentator compared me with Martin Bryant) to senior media and critical figures ringing their mates and encouraging them not to publish anything I wrote. I couldn't afford litigation, and came into the system bereft of contacts, so had no means of fighting back. Writers — especially new ones — are very poorly paid. I made the princely sum of \$1.39 a copy out of book sales, so even the tag 'bestseller' didn't mean a great deal.

As a stopgap, I went teaching and threw myself into sport — martial arts, running and cricket. Sport kept me sane in my first year out, especially when my father managed to kill himself off in embarrassing circumstances. True to form, he'd been dabbling in the criminal underworld, and managed to die 'on the job' in a local brothel whilst redeeming a favour. According to the copper who delivered the news, the prostitute in question swore off the 'game' for all time. I suppose you would.

Mum had always known that he was pretty much a bum, but that didn't make dealing with the police and the possibility of media exposure any easier. We made sure there was no media presence, which meant no funeral notice in the paper. Sympathetic doctors and coppers ensured the exact location didn't turn up on dad's death certificate. The *Courier-Mail* somehow heard about the death, publishing a brief — and false — obituary. For the first time ever, we gave thanks. Mum also insisted on the cheapest possible funeral, which meant no service and a chipboard box. She was furious, bitter and humiliated, although people not in the know mistook it for grief. My enduring memory of the whole fiasco is sitting at Logan Funerals staring at dad's coffin while an extremely uncomfortable funeral director fiddled with his shirt collar and tried to avoid eye contact with everyone in the room. He didn't know the story — only the police, doctor, mum and the sibs did — although I suspect he guessed.

Unfortunately, I found some people in the teaching profession had also 'formed a view'. One woman festooned

the walls of her office with anti-me cartoons; she would make a point of ostentatiously reading Robert Manne's book whenever I walked past. Soon enough, I realised that English staffrooms were the problem, as was staying too long in one place. From then on, I did nothing but month-long supply jobs and made a point of asking for a majority physical education timetable wherever I could. This ensured I wound up in HPE or Science staffrooms, where no-one gave a stuff. Literature was in its proper place — what people read on the train.

When someone formed a view to the extent of spitting on me in a school car park, I prepared to emigrate. I'm a dual national (dad was born in London), which meant a British passport and the right to permanent residency.

Living in the UK for just over two years was immensely liberating. I earned my Shodan (black belt) in Shotokan Karate with Sensei Enoeda, proved an effective teacher in some of London's toughest schools and made some life-long friends. Added to the mix were an outrageously alcoholic landlady, a truly barmy Scientologist flat-mate, a funky Nigerian boyfriend and the opportunity to cover the David Irving libel trial. Life was good, and I had no desire to come home until I learnt mum's health was failing.

Mum had developed a heart condition and was taking all sorts of medication, sometimes at the wrong times. I took slightly longer supply jobs — three months each, for stability — and did my best to look after her. Much to my later regret, I again started writing for the *Courier-Mail*, and found the peace and quiet I'd managed to achieve in the UK incompatible with writing.

Law

The one positive thing to occur during the *brouhaha* was meeting Andrew Greenwood, then a partner at Minter Ellison Lawyers. During 2005, he was elevated to the judiciary, and is now Justice Greenwood of the Federal Court. His new position did not surprise me in the slightest — he's an adornment to the profession.

Andrew advised me with great acumen and care, and was the first

outsider wholly on my side. Previously, I'd assumed my publisher or 'friends' I made through literature would fill this role, only to be disappointed (one wrote a 'tell all' book that would make *Who Weekly* proud). Andrew became my model, and if my decision to return to university aged 30 to study law is attributable to anything, it's his example.

In August 2001, I wrote my last copy for the *Courier-Mail*. On October 1, 2001, I wrote my final piece for the *Sydney Morning Herald*. This latter was in response to 9/11 and the anti-Semitism and anti-Americanism of many Australian intellectuals. I took time to put a few of the more outrageous lies told about me out to pasture, and signed off on literature. I sold my Australian Literary Society Gold Medal (another of the prizes I'd won) to pay for law textbooks and worked at supply teaching two days a week to pay my way through law school.

Needless to say, the *Courier-Mail* wasn't best pleased, and spent a good whack of my first year making life difficult. This involved using Queensland's Freedom of Information legislation in a desperate bid to obtain any and every document the University of Queensland held that happened to mention me by name. The main instigator was a single journalist, Deborah Cassrels. At that time married to Chris Mitchell, the editor, she had a series of odd vendettas against people; I was only one. Interestingly enough, Robert Manne was another. Once Mitchell left Queensland to edit *The Australian*, the frivolous FOI applications stopped.

Like living in the UK, studying at the University of Queensland's T.C. Beirne School of Law was immensely liberating. Apart from the fact that I was good at it, law suited the combative side of my personality. I liked the idea of taking sides in a case, which led to me representing the law school in mooted competitions (mock trials). That said, while I was busily collecting scholarships and prizes, enjoying having my mind stretched in all sorts of interesting ways, I'd not noticed that mum was gradually getting frailer. I simply took on a greater care

burden and assumed she'd 'turn the corner'. For that reason, her death at the end of my second year caught me completely unawares.

My mother was an outstandingly good person. She'd done her level best to provide for the four of us kids while dad dragged the family from pillar to post, got sacked from various jobs and landed in front of the beak. Mum left school at thirteen and had no education to speak of, but she made sure we respected hard work and valued education. A tireless community worker, Logan's Chinese community in particular felt they'd lost a special friend. We resolved that — regardless of the consequences — mum would get a public notice and a good send-off. The local Buddhist Temple organised her funeral, which was almost festive. People spilled out of the chapel onto the street outside, while my sister delivered the eulogy.

The *Courier-Mail's* Tess Livingstone was considerably less vindictive in her harassment than Deborah Cassrels, and although irritating, her attempts (last year) to dredge up dirt were amusing rather than destructive. She learnt through an 'anonymous tip-off' (*someone else with no life?*) that I was lecturing at the University of Queensland, and was to start in the profession as a Judge's Associate at the Supreme Court. She at least had the courtesy to email me, and although the two articles she wrote were full of the usual faux-controversial beat-up, by comparison with what had gone before, they were anodyne.

What really irritated me was the paper's attempt to obtain an up-to-date photograph (all it had was my by-line pic, now several years old). Chris Griffith and a photographer bailed me up outside my class, after finding the location by pretending to be UQ students who'd lost their timetables. A naïve young scholar using the university's wireless network was their target. Fortunately, I'd gotten pretty good at 'lawyer's bull' and talked them out of trying to take pictures outside a lecture theatre where students were now congregating (luckily, my students saw the funny side).

The two of them sat outside for the

rest of the class (*memo to Chris Griffith: you should now know the principal exceptions to indefeasibility in the Torrens system*) and afterwards I took great pleasure in losing them in the mass of complexity that is the UQ campus. I can still see Chris Griffith's shiny, bald head reflecting light as he ran after me along the corridor in front of the Prentice building.

Skeptics

Why Skeptics, and why this tell-all piece in a magazine better known for debunking pseudoscience, puncturing religious pomposity and investigating paranormal claims?

There are two principal reasons. First, I believe the media is characterised by sensationalism and falsehood, sometimes on a level that parallels Answers in Genesis or the folks who believe in crystals' healing power. It prattles much about 'accountability', but when Queensland Premier Peter Beattie makes mild suggestions that mechanisms for administrative review — the Ombudsman and FOI, for example — be extended to the press, he is castigated.

Using the prestigious A N Smith Memorial Lecture in Journalism at Melbourne University to articulate his proposals, Premier Beattie outlined what most thinking people already know — journalists are held in singularly low regard among the wider community. In a market defined by lack of competition, he argued that it was *'time for the media to embrace an accountability regime similar to that imposed on government, on parliament, and on other public institutions'*. He stated that:

*[M]embers of the public should be able to ask of newspapers and electronic media the same questions they can demand of their representatives: Why was this decision taken? Who was involved? What did it cost? What alternatives were considered?*⁸

Few trouble to enquire whether freedom of speech and freedom of the

8. www.thepremier.qld.gov.au/news/media_matters/index.shtm Visited 12 February, 2006.

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press are cognate (they aren't — imagine a Venn diagram with only a small overlap), or whether it is reasonable to demand a free press also be an accountable press.⁹ Media calumnies deny some people a fair trial and saddle others with false accusations. Juries are contaminated, businesses destroyed, lives ruined. There is a grim toll of those who have suicided after press exposés. Who remembers the Filipino TV repairman, or God forbid, the Paxtons? Persons who mislead and deceive in trade or commerce are caught by section 52 of the *Trade Practices Act*. Why is the media immune from the section's operation? Are they some form of protected species? *Sed quis custodiet ipsos custodes?*¹⁰ Sure, it's easy to argue that Beattie — a celebrated 'media tart' — is engaging in special pleading. It's remarkably difficult to get information out of Government owned Corporations in Queensland, partly because they have been sheltered from some of the review mechanisms available under administrative law. That said, his central point remains valid. It is true that 'some journalists are public figures' while 'all journalists enjoy extraordinary access to information'. Other public figures carry the risk of exposure. Why not the ladies and gentlemen of the press?

The catalogue of errors produced by media and critics alike in my case almost beggars belief. Despite the public availability of such things as a registry of births, deaths and marriages, the press could not get my date or country of birth correct or the location of my parents' marriage (Mossman, Far North Queensland if you must know). For some reason they seemed to like Scunthorpe, Yorkshire; I have no relatives anywhere in Yorkshire. To these were added falsehoods about my family's financial position and professional status. Many media outlets awarded my father an engineering degree. He actually left school

at 15. Andrew Greenwood once suggested that for many among the chattering classes, the idea that 'white trash' could do what I had done was inconceivable. It therefore became imperative that my parents be awarded degrees they did not hold and riches they did not own. Worst of all were lies about my family's political orientation. It seemed that because I had written about fascists and racists with some degree of humanity, I must therefore be their political kin. The fact that there were public records of my involvement in student politics as a Democrat — not to mention the distinguished participation by other family members in the union movement and Labor Party — did not seem to matter.

Of course, there is defamation. As I discovered, it is a rich man's tort. The inexpensive processes of administrative law are denied to ordinary citizens traduced by our moral guardians. Only the very rich can defend themselves, and journalists like easy targets. This means the wealthy get off scot-free, while the press inflicts its silly moral vanities on the rest of us.

Then there is the refusal to be precise in written expression, sadly sometimes ideologically motivated. A personal *bête noir* is the media's failure to use the word 'terrorist' to describe suicide bombers in Iraq and Israel. The lawyer in me contends it is better to describe the substantive content of all such actions as terrorism. This means that the people who blew up trainloads of German soldiers, raped many French women as *collaborateurs* post 1945 and had a happy knack of planting bombs in cinemas were also terrorists. This linguistic clarity would then force us to confront a painful question: can terrorism ever be justified?

The media needs Skeptics. It needs people to seek the evidence, challenge the claims and oppose uncritical sensationalism. I accept the questions I ask may have answers that ultimately favour the Fourth Estate. That said, we are entitled to reasoned responses and enlightened debate.

Second, I wrote this piece as a form of thanks to the people on the *QSkeptics* email group who formed

their impression of me based on who I am, rather than what other people — media and critics — say I am. In my experience, this is extraordinarily difficult. Most people — even the very fair-minded — allow perceptions generated by the press to feed and inform their view of a public figure. The *QSkeptics* discussion group is the first large body I have encountered that, to a man and woman, did not do this. When Barry Williams first invited me to contribute to *the Skeptic*, I was unsure what I could write, especially as a lawyer among so many distinguished scientists and researchers. In the end, I opted to tell the story I refused to tell when offered all that cash some years ago.

Prime Minister John Howard has made much in recent times of our collective failure to respect others — in debate and elsewhere. My experience before my encounter with *QSkeptics* taught me that true respect is very difficult to achieve. Despite my personal views on the matter, I've caught myself failing to respect others, including a local Rockhampton journalist who took the time to investigate a story about me properly for the local paper. I assumed — automatically, because of my experience with and views of journalists — he would balls it up. He didn't, and I had a humbling reminder of the importance of that cricketing principle regarding the 'benefit of the doubt'. *QSkeptics* has taught me that respect must be worked at, but is nonetheless a goal both useful and worthy. It is much nicer to live in a country where people don't get written off as 'mad' for their views and values — or what are reported to be their views and values.

I have learnt equal amounts from both observing and participating in *QSkeptics* discussions, which are always conducted with the utmost respect. They have allowed me to rediscover something of the sense of wonder and adventure that once made both writing and learning so enjoyable. Truly, they have set me free.



9. As suggested by Kantian philosopher Onora O'Neill in *A Question of Trust: the BBC Reith Lectures 2002* (Cambridge,

10. Juvenal, *Satura VI*; 'who guards the guardians?'

New Skeptics Prize

After a ten year association with the Australian Museum Eureka Prizes, Australian Skeptics has, with regret, decided to withdraw its sponsorship and to institute its own Skeptics prize.

There are several reasons for this decision:

initially AS was one of six sponsors, but at the 2005 Eureka Prizes we were one of 23, with a consequent reduction in the impact of our message;

as a sponsor, we have always paid an extra contribution to cover the Museum's administrative costs — over the years this has increased, while the prize money has remained static. When we were informed that for 2006, the administration contribution would exceed the Eureka prize money by a considerable sum, we decided that, as an organisation with limited resources, we could no longer be a sponsor.

We still regard the Eureka Prizes as a very important vehicle for the promotion of Australian science and wish them all the best for the future.

Australian Skeptics Prize for Critical Thinking

The Australian Skeptics Prize for Critical Thinking will have similar criteria to those used for the Skeptics Eureka Prize. It will be awarded for work that investigates conventional wisdoms and beliefs that owe little or nothing to the rigours of scientific method, that promotes rational thinking in the community, or reflects the importance that Australian Skeptics place on critical thinking in the education of young people.

Entries are invited for work in the physical or life sciences, humanities and media, that encourage the rigorous and critical investigation of issues, ideas or beliefs that have no rational basis — in effect, skeptical analysis of pseudoscientific claims.

Work submitted for this prize may include the contribution of teachers at all levels of education, who have devised or instituted innovative programs that encourage critical thinking above and beyond normal curriculum requirements. Work submitted must have been undertaken/published/broadcast in Australia by an Australian citizen or permanent resident within the five years prior to the closing date for entries.

Closing date for entries will be two calendar months before the Convention.

Members of state committees and members of their immediate families will not be eligible for consideration.

Judging will be carried out by a panel nominated by Australian Skeptics.

Judging Criteria

Entries will be assessed against the criteria of:

- originality;
- the extent of "critical thinking" involved — ie the extent to which the work submitted challenges/examines conventional wisdom, or beliefs that have no rational or scientific basis, or promotes such attitudes among the public, especially young people;
- scientific excellence and reasoned exposition.

Presentation

The Australian Skeptics Prize for Critical Thinking will be \$10,000.

The winner of the 2006 Australian Skeptics Prize will be announced and the cheque presented at a dinner held in conjunction with the Australian Skeptics Annual Convention in Melbourne on 18-19 November.

Appeal

As this will be a new venture for Australian Skeptics, we have not yet set all the details in stone and we welcome input, including refinements of the criteria, from our members,

Of particular importance are methods of publicising the availability of the Australian Skeptics Prize for Critical Thinking. Many of our subscribers belong to relevant professional associations, societies or institutes (eg, science or history teachers assns, Institutes of physics, biology, geology, engineering, medical, pharmaceutical, psychological assns and the like). Most of these bodies will have web sites or journals and might well be amenable to advertising the Skeptics prize to their members. We rely on our subscribers to make us aware of such bodies, as soon as possible.

Details of the prize and entry forms will be on our web site, www.skeptics.com.au in the near future.



Intelligent Design on Trial: Verdict – Dud Science

Landmark decision in court torpedoes ID fantasy



Martin Hadley, President of Australian Skeptics and barrister, freely admits that this shirt provides no evidence of Intelligent Design.

If only I had a dollar for every time I have said to a client “In Court, it’s not like it is on the telly...” Well, Rumpole is fairly accurate but Australian trials are certainly not like the televisual projections of US Courts with vitamin-crazed attorneys swaggering up to within inches of trembling witnesses or boggling jurors. Examples of the real thing such as the OJ trial are not much more encouraging, and the reputation of US justice suffers as a result. Then there are the disconcerting (and usually inaccurate) stories of whacko judgments like the person who tried to dry their wet dog by putting it in the microwave and then won against the manufacturer for not warning against this. But just before Christmas we got an example of a judgment from a US District Court (ie a Court half way up the ladder) which is one of the finest I have ever seen.

The case

Judge John E Jones III has restrained a school Board in Dover Pennsylvania, from spruiking Intelligent Design as a scientific theory. The Judge found that ID invoked and permitted supernatural causation, despite its official stance of not identifying the actual designer. Secondly:

the argument of irreducible complexity, central to ID, employs the same flawed and illogical contrived dualism that doomed creation science in the 1980s.

In other words ID repeats the error of saying that the only choice is between God as creator; or evolution. The Court confirmed that ID’s attacks on evolution have been refuted; it has failed to gain acceptance by other scientists; it has not produced peer-reviewed publications and it has not been tested or researched.

We can expect ID supporters to downplay this as one decision concerning one school but it was a six week trial where the ID supporters made a stand and called their top experts. One was Professor Behe, a star of the notorious and misleadingly entitled DVD *Unlocking The Mystery Of Life*, produced by The Discovery Institute. (Isn’t that a priceless name for a body dedicated to reaction and superstition?). This is the DVD which is being urged on Australian schools, aided by some careless comments of the relevant Federal Minister, Brendan Nelson

Judge Jones has done mankind a huge favour. If you have not sat through the turgid fulsomeness of the DVD, you needn’t bother — the Dover Defendants ran with every one of the DVD’s arguments and Judge Jones rejected them. You often find that both sides provide worthy experts and the Judge will prefer one opinion without criticising either. Here however, there were substantial backdowns in cross-examination by the ID experts. The judgment also

dismisses the ID textbook *Of Pandas and People* as riddled with error and out of date. Let us hope that Australians will be spared that rubbish.

The judgment gives the ID luminaries such a thrashing that one wonders whether their professional reputations will ever be the same.

Even that pales in comparison to the withering condemnation of certain aggressively Christian Board members who demonstrated their respect for Jesus' teaching by lying to the Court. We see how the Board's more devout members inveigled their colleagues into an intellectually dishonest 'ID Policy' that ended up being unmasked for the religious propaganda that it was. That exercise in deception ended up costing the school a fortune in legal costs.

Incidentally, one popular avenue of denial commonly used by creationists has been blocked. Far from being one of the 'flaming liberals', so beloved as whipping-boys by the religious right in the US, Judge Jones is acknowledged as a conservative jurist and was appointed by the present administration.

What is ID?

You may find the judgment echoing your own thoughts when you read the history of ID and find it is just another version of creationism, aka 'creation science'. In a nutshell — creation scientists received such a shellacking in Court judgments and scientific literature for their logical and factual errors about topics like how the flood produced the fossils, and their distorted version of the second law of thermodynamics, etc, etc (etc!), that something new was needed. What to do? Just as 'Amway' became 'a marketing proposal', the creationist tacticians decided that references to a creator or creation were better left out, and 'Intelligent Design' was born.

IDers played at being more scientific than creationists because they never said the designer was Yahweh 6000 years ago. Call it a 'theory' of intelligent design and it sounds even more scientific. Then there was what appeared to be a worthy scientific

concept of "irreducible complexity". Creationism was back in the ring for another swing.

Irreducible complexity

The logic of irreducible complexity or the "purposeful arrangement of parts" is attractively simple and goes like this:

- You take a selected example of a specific part of some living thing, IDers' favourite being the propulsion system of a bacterium that lives in water — it spins a hair-like projection as a kind of propeller.
- You identify the components of the propulsion system. (Computer animation comes in very handy for this and makes it all look much more mechanical than the slimy reality.)
- You then argue that if you remove any of the bits, the whole thing is useless. Their favourite illustration is a mousetrap. (By this definition, my Lada was not irreducibly complex, because it made progress even though numerous parts had failed, rattled loose or had never been installed during manufacture.)
- Next point is that none of these components are of any use by themselves.
- Selection pressure would not have produced them.
- You only get a result if all the parts turn up simultaneously to create the working system.
- Evolutionary theory cannot explain the sudden appearance of an irreducibly complex working system!
- There must have been a designer.
- But who is was the designer? Instead of mentioning Yahweh, you then make the ever-so-'umble observation that science cannot answer this question.

ID got legs because the first four points sound like reasonable scientific propositions and like any scientific idea, evolution must be open to scrutiny.

No skeptic could complain about

an assertion that a life form appeared to defy the principles of evolutionary biology. A scientific advancement often begins with the discovery of something that does not quite fit within the existing laws, even though they may have done a great job explaining what has been considered so far. Newtonian physics was fine up to a point, but then.... The problem for ID was that as science, it never got beyond being a question: 'how do you explain this irreducibly complex system?' It was devoid of a scientific answer.

In this respect, it was no improvement on creationism and creation science. By tracing the origin of ID, the Judge showed that as positive proof of something, it goes no further than Thomas Aquinas nearly 800 years ago who reasoned: wherever complex design exists, there must have been a designer; nature appears complex and must therefore have had a designer.

The only difference is that ID officially refrains from saying that the designer is God. 'Man was created yes I know; because the Bible tells me so' is not a scientific statement. Nor is 'I don't believeeeeeeeve it! It looks designed so it must BE designed'. To the extent that each version of creationism contains any semblance of scientific thinking, it consists only of attacks on evolution.

Poor logic

Logically, ID could never be persuasive, even with the most compelling example of irreducible complexity, until the biologists had given up and conceded: 'Yes, the principles of evolutionary biology cannot explain that. Not ever.' A basic logical flaw, which Professor Behe says he wishes to address in future work, is that the mutations that are part of the process of natural selection, could produce a *reducibly* complex system — one that had more bits than necessary.

This can happen when a new part supplants the function of another. There would be slight selection pressure toward getting rid of the 'reducible' components. You would expect to see them disappear but it might take

a long time and their presence meanwhile is not contrary to evolutionary principles. (As far as we can tell, the human body is reducibly complex. To have an appendix or not to have an appendix? And since I am created in the image of God I know what he looks like and I wonder what he uses his nipples for — body piercing?)

So if you found an indubitable instance of irreducible complexity, that would not prove that it must all have happened at the same time. It could have evolved from a more complex creature. As the Judge noted:

To be sure, Darwin's theory of evolution is imperfect. However the fact that a scientific theory cannot yet render an explanation on every point should not be used as a pretext to thrust an untested alternative hypothesis grounded in religion into the science classroom, or to misrepresent well established scientific propositions.

Argument full of holes

The length of the trial allowed both sides to explore these arguments in great detail and the brevity of this article should not connote that ID got short shrift. The Judge found space to tackle each of irreducible complexity's prize examples — the bacterial flagellum, blood clotting and the immune system.

Even the embarrassing cross-examination is included, eg, Behe had claimed in 1996 that science would never find an evolutionary explanation for the immune system; but in the trial he was confronted with fifty eight (count 'em — 58!) peer reviewed publications and numerous textbooks to the contrary. Nevertheless for him this was not "good enough".

The experts called to support ID painted themselves into a corner on what is or isn't science. We all know from school debating that the person with nothing better to say will cavil about definitions.

From p 68, bearing in mind that the IDers were the Defendants: First, defence expert Professor Fuller agreed that ID aspires to "change the ground rules" of science and lead defence expert, Professor Behe, ad-

mitted that his broadened definition of science, which encompasses ID, would also embrace astrology. Moreover defence expert Professor Minnich acknowledged that for ID to be considered science, the ground rules of science have to be broadened to allow the consideration of supernatural forces."

"Ground rules" is a concept we will hear about again. Australian proponents of ID will continue to say that it is all about freedom and balance. These are worthy goals but you do not achieve them by infiltrating part of one subject into another. When I go to an Italian class, I want to learn Italian; not German. Seriously though, why would you contaminate an Italian class with German? Only if you wanted to impede the teaching of Italian.

Unfortunately, this is what some of the ID academics are up to, for all their impressive titles and big glasses. One of the "Governing Goals" of the Discovery Institute, which made the DVD, is "to defeat scientific materialism and its destructive moral, cultural and political legacies" and "replace materialistic explanations with the theistic understanding that nature and human beings are created by God."

Incomparable evaluation

The trial has dealt with each attack on evolution, including each alleged instance of irreducible complexity featured in the DVD. ID has been put through the incomparable evaluation of an adversarial trial where the Judge had the assistance of the best experts each side could find, with neither party being short of money. Each supposed example of irreducible complexity has been explained by the existing principles. None of the things raised by the Defendants in Court defied evolutionary biology.

Outright rubbish ...

While the novelty of 'irreducible complexity' deserved a moment's thought, there is some outright rubbish that goes with it, eg the assertion that vast numbers of evolutionary biologists are recanting and turning to ID.

Despite their considerable resources, the producers of the DVD could only assemble a small assortment of academics who tell us things like they find ID 'more satisfying' than evolution. A few of the lads have qualifications in areas of dubious relevance such as philosophy and law. The work of the ID biologists has not received the scientific recognition frequently claimed.

Religious people often suggest that they have an inherent moral superiority to atheists. I am not so sure. A person who knows that they must live with the consequences of their actions could act just as morally as one who thinks that accepting Christ absolves sin.

...and downright lies

The case is food for thought when we see the shabby conduct of the more religious Board members. Bonsell told the Court he had no interest in Creationism, while a trail of documents, such as meeting minutes, recorded the opposite. Member Buckingham is immortalised as a buffoon that Voltaire or Thackeray would have been proud to have devised. He removed a mural depicting evolution from a classroom and "gleefully watched it burn." He lied to conceal the fact that copies of the *Pandas* book had been donated by creationists. He advocated the teaching of creationism and ID with gems like:

I challenge you to trace your roots to the monkey you came from... 2,000 years ago someone died on a cross. Can't someone take a stand for him?

What next, equal time for the Spartacus theory of workplace relations?

The result

ID has now been legally classified as a tool for preachers not scientists. There is nothing wrong with being a talented preacher. As an aspiring advocate, I see in such people a skill that I lack; but let's not forget that academics like Behe purport to be scientists not preachers.

Ironically what they fail to realise is that behind things like the ID

Policy and the DVD is a mindset where science and religion are in conflict and indeed, that religion must be protected from science. It is a contemptibly primitive world view and it leads to other errors, such as the “contrived dualism” whereby the only two possible origins for life are said to be Godless evolution or Genesis creation. Next boo boo is to treat any query about evolution as positive evidence for Genesis creation.

The US does not have a monopoly on people who want to treat the Bible as a science textbook. Many of these people are ignorant about science and don't want to know. They are not very scholarly about their Bible either.

Where does it preclude a process of natural selection leading to new species? I have not received an answer to that question even from the most unrepentant fundamentalist I have been able to find - (yes, Peter I mean you). In a classic example of the contrived dualism noted by the Judge, Peter proudly told me that he would not abandon his Bible and when it came to evolution, there was a simple choice: God or Man.

No intellectually honest Christian has anything to fear from scientific work on evolutionary biology. Most of them realise that. Let us persuade the remainder while keeping an eye out for the fundamentalist minority whose true agenda is to impede the teaching of evolution. Their zealotry is born of ignorance. People like Peter have probably not read even the first paragraph of *On The Origin of Species*. They might settle down if they at least read the last paragraph of that book.

There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved.



Volunteers Needed

Prof Chris Del Mar, Dean of the Faculty of Health Sciences and Medicine, Bond University, and Lilian Derrick of the Gold Coast Skeptics, have been exploring methods of finding people who will make good hand-searchers and supporters for the Cochrane Collaboration. What better way than by enlisting the skillful aid of the subscribers to the Skeptic?

The following information comes from the Cochrane web site. If you can help, please log on and see what is required.

The Cochrane Collaboration is an international organisation that aims to help people make well-informed decisions about health care by preparing, maintaining and promoting the accessibility of systematic reviews of the effects of healthcare interventions. It is a not-for-profit organisation, established as a company, limited by guarantee, and registered as a charity in the UK.

It is estimated that somewhere between 20,000 and 30,000 health related journals are published worldwide, which makes the job of keeping up to date with recent discoveries and best practices a great challenge. Good decisions about health care rely on good reviews of the results of research. One option for health care workers in managing this deluge of information is to read systematic reviews. However, some reviews may be poorly written or biased in their conclusions. This can lead to delays in implementing health care practices that have been shown to be highly effective and the persistence of practices shown to be ineffective or possibly harmful.

The current trend in many parts of the world is for clinical practice to be evidence-based. Cochrane reviews,

which use objective, reproducible methods to identify eligible studies and to analyse data, are widely accepted as the gold standard in systematic reviewing. Prior to conducting a systematic review, all relevant research reports must be located, and in the case of the Cochrane Collaboration, this generally means reports of controlled clinical trials (CCTs), in particular randomised controlled trials (RCTs). The RCT is regarded by many as being the most effective mechanism for critically evaluating the effects of health care practices. Cochrane reviewers rely on several means of searching for relevant reports, including both electronic and manual methods. For complete identification of published reports, there appears to be no alternative to a page-by-page search of the healthcare literature. This manual searching is known as ‘handsearching’.

The Cochrane Library is the primary vehicle for disseminating the work of the Cochrane Collaboration. It is a regularly updated collection of evidence-based practice databases that includes The Cochrane Central Register of Controlled Trials (CCRCT). CCRCT is a bibliographic database of controlled trials identified by contributors to the Cochrane Collaboration and others, as part of an international effort to systematically search the world's health care journals and other sources of information, and create an unbiased source of data for systematic reviews. Handsearchers make a vital contribution to CCRCT (also known as CENTRAL), by ensuring that reports of CCTs and RCTs are identified from journals and conference/symposium proceedings that cannot be searched using electronic databases.

Relevant web sites:

www.thecochranelibrary.com

This is where the output of our work goes. The Cochrane Library is free to all Aussies .
www.mrw.interscience.wiley.com/cochrane/clabout/articles/ARI/frame.html

This is one of the links to othe Group (one of the 50 ‘entities’ that make up the Collaboration round the globe)

Fluoride:

Is it Really That Hard to Swallow?

Shining the light of science into dark cavities



Don Wilson is a private dental practitioner in Adelaide. He is the former Chairman of the Australian Dental Association's Oral Health Education Committee and continues to have a personal interest in the subject of water fluoridation.

Fluoride

Most water supplies contain the fluoride ion. For decay prevention, the optimal concentration is between 0.6 and 1.1 parts per million (ppm — equivalent to mg per litre), depending on the climate and therefore the expected ingestion of fluids. Most surface water supplies (eg rivers) in Australia contain less than optimal levels, so more fluoride needs to be added to reticulated supplies to achieve the correct level. Some groundwater (eg bores) supplies throughout the world can be too high in fluoride and this means the water is unsuitable until the fluoride is removed.

The single most important adverse effect of water fluoridation is dental fluorosis. This is caused by an interference in the formation of the hard outer layer of the tooth, the enamel, which occurs if the amount of fluoride ingested during tooth formation is too high. It can vary from very mild white patches of no concern to severe pitting and staining. Such extreme cases of pitting are very rare in Australia.

The controversy

The water fluoridation 'controversy' seems to be gaining the same status as the abortion or voluntary euthanasia debates. Why is this? Is it open versus closed minds? Do people make up their minds early and refuse to undertake any more rigor-

ous reading on the subject, let alone reading that is contrary to the opinion they have already formed?

Is it the emphasis some people place on the emotional vs the rational side? Are some people unable to allow more rational assessments to overcome the strong emotional arguments regarding, say, populations getting 'mass medication'?

Or is it worse than that? Is bad, unbalanced, misleading information being put forward?

Some dentists dismiss opponents as cranks and idiots. Some members of the public swallow illogical and sometimes mischievous arguments against fluoridation as easily as they would swallow water.

So, are the health professionals misleading us by ignoring dangers? Are the anti-fluoridationists misleading us by overstating the risks?

The research

Many reports based on literature reviews support the optimal-dose fluoridation of water supplies. Health authorities — those people whose job it is to analyse issues such as this and make recommendations to the decision makers — are satisfied that it is a safe, economical, effective and equitable public health initiative.

Some researchers point to the need for further research funding to continue to monitor populations for

any signs of adverse consequences. Most agree with this position although the cynics say that this is a plea for more funding from researchers in the field, and that because fluoride exposure has been with us for decades and no new adverse health effects have been noticed. More research should not receive any priority over more serious and readily identified health concerns to a community.

However, there remains a dissenting view. This dissent is voiced in Australia by Dr Mark Diesendorf. He has been prominent in public debates and submissions and has been critical of research and the conclusions of that research. He is a Senior Lecturer at the Institute of Environmental Studies at the University of New South Wales ^[i].

It is not known whether a close critique has ever been made of Dr Diesendorf's opinions. This paper sets out to examine some of them in an attempt to do an Ockham's Razor on the subject — to strip away all the irrelevant layers and get to the core elements that should be of concern to local communities who are considering continuing or removing fluoride from their water supply.

Dr Diesendorf

One can look to the Internet and find Diesendorf articles that go back to the 1980's^[ii]. One in particular^[iii] caused more than a ripple in research circles because it essentially postulated that the decline in child dental decay rates was the same in fluoridated and non-fluoridated cities in Australia so it could not be attributed to water fluoridation.

This opinion — that there was no evidence for continuing water fluoridation — clouded the issue, especially when it was presented by way of submission to the National Health and Medical Research Council (NHMRC) in 1989. However, in 1991, the NHMRC concluded that Diesendorf's analysis was "simplistic and uninformative" and that there "is a failure to conduct any formal hypothesis tests in support of the assertions". The crux of the criticism

of Diesendorf's work was related to the statistical analysis — he had used descriptive time series analysis rather than a formal statistical evaluation. Interestingly, in the 1986 *Ecologist*^[ii] article, he had referred to himself as "a principal research scientist in the CSIRO Division of Mathematics and Statistics".

This also prompted Professor John Spencer, then head of the Australian Institute of Health and Welfare's Dental Statistics and Research Unit (now ARCPOH) based at Adelaide University to undertake a further study (1996)^[iv] to re-examine the role of water fluoridation in decay prevention. The study compared the decay rates in Brisbane (no water fluoridation) with those in Townsville (fluoridated since 1964) and Adelaide (fluoridated since 1971). It demonstrated a clear benefit for Adelaide and Townsville, especially in children, and offered evidence that the benefit is greater in lower socioeconomic groups.

Australasian Science

In September 2003, Dr Diesendorf wrote an article for *Australasian Science* magazine which was entitled "A kick in the teeth for scientific debate" and which was announced by the magazine as follows: "Mark Diesendorf says that authorities are refusing to acknowledge evidence of the harm caused by water fluoridation — and its lack of efficacy".

This article was effectively a list of the major objections that Dr Diesendorf continues to hold about water fluoridation. But it contained many misleading statements, half-truths, omissions of key information and, again, a poor statistical analysis. The next sections examine some of those claims as laid out in his article.

Fluorosis

Dr Diesendorf pointed out that one rigorous study, the University of York Review (2000) "estimates that up to 48% of children in fluoridated areas have some form of dental fluorosis". He failed to include the remainder of the quoted sentence

which stated "...and 12.5% (95% CI 7.0, 21.5) for fluorosis of aesthetic concern". This is quite significant because in Australia dentists report very little restorative activity these days for the correction of fluorosis. As well, the full context balances the risk of an occasional white patch against the lack of decay in these mouths. Some young patients even report a liking for the whiteness of their teeth.

He then discussed skeletal fluorosis, a bone condition also caused by high fluoride ingestion (eg from over 4 ppm fluoride in water supplies). He looked to India and China where he claimed cases of skeletal fluorosis are seen at water levels of only 1 ppm. He then stated "...naturally occurring fluoride is regarded as a chronic poison in India and China, where the main issue is how to remove it from drinking water as effectively and cheaply as possible." No more explanation is given. This is a quite unforgivable half-truth which misleads the reader because he leaves out crucial information which puts the India/China experience into context.

China has some groundwater supplies that are over 8 ppm. As well, there is an enormous industrial fluoride pollutant problem (from coal combustion) which enters water supplies and the food chain and is even inhaled. Water fluoridation under these conditions is absolutely contraindicated and fluoride must be removed from any high level water supplies to make it usable.

In India, if surface collection of water fails (monsoons), groundwater supplies are often used to fill dams and supplement supplies. Often these subsurface water supplies are very high in fluoride and need to be diluted with water from other regions or the fluoride must be removed before the water is usable. These are appropriate actions for conditions in those countries and are not experiences that we have in Australia. Furthermore, there are no reported cases of skeletal fluorosis in Australia caused by ingestion of fluoridated water.

Safety margins

Dr Diesendorf makes the point that with regard to the toxicology of any product, the safety margin should be at least 100 times the exposure level. The reason is related to safety — to make it extremely hard to reach an unsafe level. He states that with fluoride, the USA's unsafe level for fluoride in drinking water is set at 4 ppm, or only 4 times the average water fluoridation level of 1 ppm so it is possible for people to reach an unsafe ingestion over a period. However, on that basis, the ambient level of water supplies (eg, in River Murray water it is about 0.3 ppm) would need to be reduced to .04 ppm to comply with the 100 times safety margin. Neither Dr Diesendorf nor any other person has ever called for the reduction of all water supplies to less than 0.04 ppm fluoride, so it can be reasonably held that a safety margin of 100 times is an inappropriate standard for fluoride.

Arthritis

Dr Diesendorf notes similarities between the early stages of skeletal fluorosis and the symptoms of arthritis. He then postulates that the increases in the rate of arthritis in the community of 14.7% from 1995-2000 could be signs of the early stages of skeletal fluorosis in the population. This is blatant speculation on his part in the context of an article that one would expect to be presenting good evidence. He makes no point about other reasons for such an increase. There is no mention of the total lack of support for this idea from reputable health authorities such as Arthritis Foundations here and overseas.

Osteoporosis

Dr Diesendorf then speculates on a link between fluoride dose and the prevalence of osteoporosis and hip fractures. He states that some osteoporosis treatments consisted of high dose fluoride and this led to a high prevalence of hip fractures. In fact, some studies showed the opposite (a reduction) but the technique is now not commonly done.^[v] His views

contrast with those of reputable health authorities and yet he does not put his comments into context.

Other diseases and conditions

Such as Alzheimer's disease, asthma, memory disturbances, migraine, mental disorders, early onset of puberty.

Dr Diesendorf outlines some research into complex biological processes which postulate a connection between fluoride exposure and these conditions. Once again, this sort of research should not form part of a seemingly educated and informed opinion on a subject until it receives wide support — until it is accepted and is added to the wider body of evidence. There is no such support for these claims, so caution about the speculative nature of the comments should be made in an article like this.

Proponents dodge debate

Dr Diesendorf claims that proponents of fluoridation regularly refuse to debate the “anti-” lobby and, especially, the prominent US opponent of fluoridation, Professor Paul Connett, who visits our shores on occasions.

It is likely the reluctance of health authorities and professional groups to engage such people as Diesendorf and Connett are due to these men's polemical style. In debate, if one party uses half-truths, emotion, omission of key facts and speculative or misleading statements, then it becomes quite onerous to present the other viewpoint. A deliberative scientific view about safety fails miserably in public debate when your opponent has just told the audience that fluoride may cause cancer in children.

Most people with a fair-minded attitude towards public health prefer to put their opinions in carefully constructed written submissions. Interestingly, however, despite their skills in debating the matter in public meetings and in the media, both Connett and Diesendorf have been spectacularly unsuccessful in their attempts to influence an informed audience — the health authorities

throughout Australia and the rest of the world.

Alleged benefits.

It is here that one is reminded of Dr Diesendorf's previous employment as a scientist in the CSIRO's Division of Mathematics and Statistics in the 1980's.

The accepted measure of dental disease is called the DMFS or dmfs which is a score of the number decayed surfaces (S) on the teeth. So one tooth may have decay (D), it may already have a filling (F) or it may be missing (M). The capitalisation indicates permanent (adult) teeth and the lower case is primary or child teeth.

Dr Diesendorf points out that the Spencer study in 1996 found a reduction of only 0.12 to 0.3 DMFS per child. He then decides that as there are 128 surfaces on the adult teeth (front, back, sides and top of a tooth are all separate surfaces), then the reductions noted by Spencer represent only about one quarter of 1% of tooth surfaces, a very small benefit for each child. This conclusion has been adopted by many authors of anti-fluoride letters to editors in fluoride ‘hotspots’ in the country.

But it is a very incompetent, negligent and misleading analysis of the statistic. How Dr Diesendorf fails to understand that this is a statistical average over a large population beggars belief. It is not measured in quarters of tooth surfaces but represents actual cavities, fillings and missing teeth over that population. His analysis is as misleading as saying that if the birth rate increased from 2.2 to 2.3, it is not significant because each woman is only having 0.1 of a baby more.

What he would have read (and consequently failed to mention) in the 1996 article is Professor Spencer's clear and unambiguous statement: “...a difference of 0.12 DMF surfaces (DMFS) per child would translate to 300,000 permanent tooth surfaces for the approximately 2.5 million children in Australia aged 5-15 years.”

This information is of extreme importance to health authorities regarding workforce requirements and

health funding because a large percentage of this work will be in the lower socioeconomic groups which rely more on State assistance.

Vested Interests

Dr Diesendorf claims *“that powerful corporate interests are behind the dental and medical associations that promote fluoridation with religious fervour...”* and he goes on to imply not a conspiracy, but a *“conjunction of professional, corporate and political interests”* in that the sugar industry benefits from the idea of *“a magic bullet to stop tooth decay”*, the phosphate fertiliser industry benefits by having a market for its fluoride products that otherwise would have to be disposed of and the aluminium industry *“which had an image problem with the atmospheric pollution it produced and funded some of the early research in naturally fluoridated regions in the USA that appeared to show that fluoride was good for the teeth.”*

This nonsense is quite offensive to people who devote their careers to health service. At least he stopped short of implying a conspiracy.

He then proposes the notion that fluoridation is supported by health authorities because it is *“a cheaper way of addressing tooth decay than running effective dental services for schoolchildren and older people, and politically safer than tackling the promotion of sugary foods that are the main cause of tooth decay.”*

Although he is unwittingly correct with the first statement (the low cost of this preventive initiative is an essential reason for fluoridating), he departs from (and insults) health professionals who are quite alert to the dietary problems with decay and consider primary care, or prevention, to be the only way ahead for our populations who are living longer and expecting more services. Whether it be diabetes, heart disease or dental decay, to prevent is far preferable than to treat. This is a basic goal in health and if Dr Diesendorf rejects this then he is out of step with what communities need. The treatment model has no

sustainability when there are preventive options available.

In fact there was one instance recently in a country NSW township where there was a local debate as to whether or not they would allow fluoridation to proceed. It seems that about 15 years before, the community had rejected fluoridation on advice and representations from Dr Diesendorf. But now they were facing the same issue and had been provided with clear DMFS scores which showed their children had a significantly higher decay experience than that of a neighbouring community which had water fluoridation.

One parent stood up and challenged Dr Diesendorf — she said that in the late 1980’s he had told them not to fluoridate and *“everything would be OK”*. Now what does he have to say? The community recommenced fluoridation a short time later.

Dr Diesendorf recently participated in a debate on Radio National’s *Science Show* regarding *“Our nuclear future”* in which he argued amongst other things, the economics against the nuclear power option. The speaker following pointed to the subject being perceived as *“a fight between good and evil”* and that *“the public is confused by the pro and anti viewpoints.”* Then, alluding to some of Diesendorf’s comments, he pointed out that *“these so-called facts on economics, safety, waste, proliferation are in fact half-truths.”* All familiar sentiments.

Ockham to the rescue

So this brings us to the central core of the argument, the basic issues that a community needs to consider when looking at fluoridation. Remembering that large parts of Australia have been fluoridated for over 25 years now, communities should approach their own decision by looking at the following:

1. The mass medication argument. This is an issue that the community needs to agree with almost in a philosophical sense. The emotional argument says that mass medication is naturally bad or unaccept-

able and there’s an end to the discussion. The term *“mass medication”* is a carefully constructed euphemism – it sounds bad. The rational approach is to ask what are the risks and benefits. Fluoridation does reach anyone who drinks tap water and/or consumes products containing fluoridated water. There are precedents of which the community has little knowledge (folates in margarine, iodine in salt). So it comes down to this. Is a community willing to accept that the addition of fluoride to their water supply will target everyone whether their decay risk profile is high or not? Am I, as a consumer, willing to drink fluoridated water even though, as a dentist, I am likely to be able to control my decay risk in other ways? Can I drink it knowing that the benefit is for others in the community who need it more than me? Answer: absolutely.

2. What decay rates are being experienced by the particular community compared with others in their region, state or country? If a community has an equivalent decay rate to a fluoridated region, then there may be no argument to fluoridate. But it is usually higher in non-fluoridated areas.

3. Communities need to accept that their own state health authorities can provide them with an up-to-date risk-benefit analysis of the whole issue so they don’t feel the need to do it themselves by way of inviting submissions and representations which invariably do not provide clarity but rather confusion. Such an analysis should include

- a. risks of fluoridating eg, fluorosis,
- b. benefits of fluoridating eg, decay reduction
- c. risks of not fluoridating eg, costs, risks and harm of treatment
- d. benefits of not fluoridating eg, no cost to the local Council, political benefit.

Continued p 24 ...

Water Fluoridation:

A Necessary Public Health Measure

More light on a perennial argument

The public water supplies to more than 70 percent of Australians have their fluoride content adjusted to about one part per million by weight (ppm). The actual figure varies a little according to the prevailing climate, since more water is consumed in hot climates than in cold. Fluoridation markedly reduces tooth decay and is supported by reputable bodies including the World Health Organisation, the Australian Dental Association, the National Health and Medical Research Council and the Royal Australian College of General Practitioners.

The decay reduction is not uniform across a community, but the average improvement is around 50 percent. Some children will have perfect teeth without fluoride adjustment, and others will be “dental wipe-outs” with it, but there will be many more of the former category and fewer of the latter with fluoridation. It costs only a few cents per person per year, and is arguably the most cost-effective public health measure.

Fluoride is added as a trace substance. It has no taste and does not impart any deleterious properties to the water. It acts on teeth in two ways, the main one being systemic; that is children aged 15 whose drinking water has always been fluoridated will have stronger and more decay-resistant teeth for life than those from non-fluoride areas. The other way is the temporary topical

effect whereby the surfaces of teeth are improved by contact with fluoridated liquids such as drinking water or toothpaste.

But what about those Australians who do not receive these benefits? These include the residents of some large cities including Brisbane and Geelong and many smaller centres where the Anti-fluoride Movement (AfM) reigns. This is a worldwide group dedicated to the non-introduction and removal of fluoridation. It has a list of hundreds of objections so that when some are dealt with, new ones appear, and they are couched in technical terms to impress “instant experts” which can include politicians, municipal councillors and journalists. None of their objections has withstood scientific examination.

Tasmanian Royal Commission

Tasmania, being a leader in fluoridation in Australia since 1953, and under pressure from AfM, set up a Royal Commission under Mr Justice Crisp in 1966 to report on the subject. His terms of reference included the determination of whether Tasmania could expect to gain material dental health benefits from fluoridation, and whether any detriment to health could result from the process. And if his report should favour the addition of fluoride to water, he was required to recommend further on who should make decisions concerning it; and whether there were satis-



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factory substitutes to adding fluoride to the water supply.

The Royal Commission advertised for persons wanting to make submissions and specifically invited experts in chemistry, dentistry, medicine and public health from all parts of Australia to go to Hobart to give evidence. Submissions by correspondence were also invited from known advocates and opponents of fluoridation in other countries. The Commission sat on 66 days, and its tremendously detailed Report was presented in July 1968. Some of its recommendations include:

- Fluorides are abundant in nature — it is doubtful whether air, water, vegetation or food materials free of fluoride can be found. It is vital to skeletal and dental health. Tasmanian drinking waters are relatively low in fluoride content.
- There is no difference between fluoride which occurs naturally and that which is added. (Note: When a molecule containing a fluoride ion is dissolved in water, it dissociates from the other element(s) of the compound. As there are many, often hundreds, of other parts per million of minerals in solution, including calcium, sodium and silicon, it is not possible for the human body, nor for an analytical chemist, to tell which was the fluoride's vehicle of entry.)
- The fluoride ion when incorporated into the teeth improves their strength, shape and structure; and it makes them more resistant to acid attack.
- With water fluoridated at 1 ppm there will be a small incidence of dental fluorosis (mottling) in up to 10 percent of children, but it is so slight as to be noticed only by a dentist. The affected teeth will be vital and decay resistant, and overall there will be a greater decrease in mottling from causes not connected with fluoride.
- It is not possible to consume toxic amounts of fluoride from a water supply with a concentration of 1 ppm.

- Water fluoridated at 1 ppm is not corrosive. It presents no problems in cooking, food processing, agriculture or animal husbandry.
- Fluoridation is designed to benefit children, and this is a most important fact when considering the blocking of its introduction on the ground that it interferes with personal freedom.
- The fluoridation of water supplies is the most efficacious method of distribution. Tablets are not satisfactory, as the regimen is beyond most parents and there are other difficulties; and including it with milk is even less satisfactory.
- Whether or not to fluoridate communal water supplies requires a decision on a major matter of public health, and the decision should be made by parliament. It is not a matter of water supply for water purposes, and to regard it as such is to confuse the principle with the vehicle of administration. The decision required transcends the capacity of local government. It is not a suitable subject to be decided by popular referendum and in any case to entrust the decision of such a serious matter of public health to a referendum would be an abrogation of parliamentary responsibility.

Justice Crisp reported that some of the witnesses opposing fluoridation were reasonable, including Sir Arthur Amies, then Dean of Dentistry at Melbourne University, but his objections were chemical, which was outside his area of expertise, and they were effectively countered by Professor T. O'Donnell from the Department of Inorganic Chemistry at Melbourne University.

Quackery and scare campaigns

On the other hand, in presenting his Report, Justice Crisp said some statements by anti-fluoride people were "on the quasi-criminal side of medical quackery". He had been told that fluoride caused an increase in juvenile delinquency, the failure of elementary school children to pass

examinations, and it was undermining Christian standards by the forces of darkness.

He said that very often these and like statements were made by people with impressive medical, scientific and academic attainments. He added that the list of ailments for which fluoride had been blamed was so extensive as to beggar description. *"From dandruff to tinea, acne to abortion, blindness to bed wetting, sterility to stammering — most known ills to which the flesh is heir have been laid at its door"*.

And so Tasmania continued with fluoridation, but it was not all plain sailing. In 1976, an American, Dean Burk PhD, formerly with the National Cancer Institute, claimed that his research comparing communities with and without fluoride showed that thousands of people were dying each year in the USA from cancer caused by fluoridation. This news spread like wildfire, and many plants in the USA were shut down. In Holland, a proposal to extend fluoridation throughout the country was abandoned, and existing plants were closed.

Several reputable organisations, including the Department of Regius Professor of Oxford University, studied Dr Burk's methods and statistics and concluded, *"None of the evidence provided any reason to suppose that fluoridation is associated with an increase in cancer mortality, let alone causes it"*. Dr Burk had not allowed sufficiently for the differences in age and race of the two communities.

Victorian Committee of Inquiry

In 1979 the Government of Victoria appointed a Committee of Inquiry to study and report on any new information on fluoridation and to advise whether there should be any change in the Health (Fluoridation) Act 1973. Its Report in May 1980 supported the findings of the Tasmanian Report, and in particular repeated word for word Justice Crisp's recommendation on how fluoridation should be implemented. It studied the question of Dr Dean Burk and confirmed that his conclusions were

Fluoridation

not valid. On the question of the Health (Fluoridation) Act 1973, the main provision of which is to give the Victorian Government (acting through the Health Commission) power to require the fluoridation of water supplies, it found no requirement for change.

Melbourne has been fluoridated for 29 years and it has been an outstanding success, but many regional centres in Victoria, including Geelong, Ballarat and Warrnambool, do not have fluoride. In my home town, Warrnambool, population 30,000, dental health is appalling. Private dentists are overloaded and the wait for free treatment is measured in years. There is a strong need for fluoridation, but the Health Minister for Victoria, John Thwaites, says *"I am in favour of it, but the community must express a wish to have it"*. That means a poll, which would be unlikely to win on a simple majority, since there is an AfM element which keeps writing to the *Warrnambool Standard* repeating Dr Burk's discredited findings about cancer together with many old and new anti-fluoride lies. Fluoride is dubbed "rat poison", and naturopaths from Geelong write about "the side effects suffered by our patients who have drunk water from the fluoridated Melbourne system." New York based Professor Paul Connett, sponsored by AfM, held a forum in Warrnambool in October 2004 to highlight the "risks associated with fluoridated water supplies". He was said to be touring Australia at the invitation of scientists, doctors and dentists (all unnamed) and "Water Quality Australia" (who are they?). He does not deal directly with health authorities because of an alleged conspiracy between them and the medical professions to "hush up" problems with fluoridation.

The constant cry of the AfM is "Fluoridation has never been proved safe!", but this is a trick as it is impossible to prove a null hypothesis.

Overdue recognition

Most of this nonsense was circulating before Melbourne was fluoridated, and if there had been a poll then, probably it would have been lost. And a poll's result would not have been fair, as those affected most by its outcome, children under 15, would not be voting.

In 2002, Mr Thwaites attended a "Fluoride Heroes" ceremony sponsored by the Victorian Department of Human Services, the University of Melbourne and Dental Health Services Victoria to mark 25 years of fluoridation in Melbourne. It honoured the five dentists who lobbied, encouraged and promoted the benefits of water fluoridation and were instrumental in its implementation, which was done without a poll. Mr Thwaites, Labor Health Minister, presented Dentistry Achievement Awards to the two surviving "Heroes", and Sir Rupert Hamer (since deceased) who was Liberal Premier of Victoria at the time of fluoridation, spoke of the courage required by his Government in making the decision. Other speakers recognised the vindication experienced by those who were politicians at the time, having improved the lives of most Victorians. At the ceremony, the recent action of Coliban Water in implementing fluoridation at Bendigo and Kyneton was warmly applauded, but the record makes no mention of Coliban's Castlemaine (population 7,000) which had been excluded by the selection process.

From my personal experience, dental problems interfered with my studies and caused me a lot of pain in Year 11 at Geelong. It was a long time ago, but I remember it vividly — I lost 3 molars that year. Thousands of children throughout Australia are now suffering similar problems unnecessarily. Fluoridation should be implemented wherever possible without further delay, and the decision is the responsibility of Governments, not their water agencies or municipal councillors.



... Fluoride from p 21

Accountability

It is extremely important that people who claim some authority on a subject provide good information and a reasonable context. There is a certain blind faith exercised by the community towards scientists and academics and their attitudes. They should not abuse that trust. As well, their reputations depend on the reliability of their conclusions, many of which influence the direction of health policy.

Dr Diesendorf 'seems to be failing on this level — his method seems not so much a scientific analysis but a cherry-picking of ideas and speculation that support his conclusions — which in any case are sometimes based on inaccurate statistical analysis. It works well in public debate, but it falls well short of impressing informed audiences, such as the CSIRO, health departments and professional associations.

Can those who peddle poor arguments be held accountable for their actions? Let the reader decide whether people like Dr Mark Diesendorf can be relied upon, or whether his views should be treated with extreme caution or strongly questioned when important public health initiatives like water fluoridation are being considered.

Notes

- i. www.ies.unsw.edu.au/about/staff/mark.htm
- ii. www.slweb.org/ecologist-1986.html
- iii. Diesendorf, M. (1986): The mystery of declining tooth decay. *Nature* 322, 125-129
- iv. Spencer AJ., Slade GD., and Davies M. Water Fluoridation In Australia. *Community Dental Health* (1996) 13 Supplement 2, 27-37
- v. www.rheumatology.org/publications/primarycare/number2/hrh0010298.asp



AiG's Technical Journal: Stop Laughing, this is Serious

Cobblers abandoning their lasts results in a load of old cobblers

In addition to its flagship *Creation* magazine, Answers in Genesis (AiG) produces another publication, the *Technical Journal* (*TJ*). This was introduced late in 1984 as 'a special technical edition of *Ex Nihilo*', an earlier version of *Creation*. Readers would be excited by the new publication's 'glossy four-colour cover' and were assured that '[e]ven though it is a technical journal, many layman [*sic*] would also be able to glean much from its pages'. (*Creation Science Prayer News*, Jan. 1985, 3)

Although *TJ* (or, to give it the full title it used for several years, *Ex Nihilo Technical Journal*) was promoted as being a 'scientific' journal of some kind — 'a must for the technical-minded' — it was clear from the first that it would cover a very wide range of issues. A recent *TJ* describes itself as:

An international journal devoted to the presentation and discussion of technical aspects of the sciences such as geology, biology, astronomy etc., and also geography, archaeology, biblical history, philosophy etc., as they relate to the study of biblical creation and Noah's Flood. (TJ, Vol. 19(3), 2005, inside front cover)

So does this mean you can send *TJ* an article disputing the reality of the Genesis creation story/stories or gently suggesting that the Noachic global flood tale is a crock? Surely you jest. Kindly refer to *TJ*'s 'Instructions to Authors':

TJ is dedicated to upholding the authority of the 66 books of the Bible, especially in the area of origins. All

members of the Editorial Team adhere to the ... AiG Statement of Faith and most papers will be designed to support this. (ibid., 128)

The 'Statement of Faith' includes the not-unexpected assertions that the Bible is the written Word of God, divinely inspired and inerrant throughout, and that '*Scripture teaches a recent origin for man and the whole creation*'. Naturally, the Genesis Flood was '*an actual historic event, worldwide ... in its extent and effect*'. (*ibid.*, 2)

Brief History

TJ got off to a slow start, with only four issues produced up to 1990. A clear majority of articles dealt with aspects of the physical sciences — so-called 'Flood geology', the alleged decline in the speed of light (remember Barry Setterfield?), criticism of dating techniques etc.

However, with the successful establishment of AiG in the United States, *TJ* began to appear first twice and then three times a year. My impression is that there are now more historical/theological-type articles than there used to be, but *TJ* still presents a superficially 'scientific' appearance and is promoted by AiG as a fully-fledged science journal. The organisation seems to have been genuinely surprised when they tried in 2000 to place an advertisement for *TJ* in the journal of the Geological Society of Australia and were unceremoniously knocked back:

Our ad did not hide the fact that the [Creation Ex Nihilo] Technical Jour-



Brian Baxter is a Melbourne based writer and inveterate observer of the wilder shores of quasi-religious thought.

nal dealt with creation and evolution. We explained that the scientific scope [of our journal] was broad, including astronomy, geology, biology, geomorphology and a number of other fancy geological fields ... [W]e were excited to think that more Australian geologists would soon have the opportunity to examine interpretations of geology from a biblical perspective. (AiG Prayer News, May 2000, 3)

In recent years, AiG has begun to claim that *TJ* is no less than ‘the world’s premier refereed creation publication’. (*Creation*, Jun. 2001, 35) Prospective contributors are assured that the organisation will provide ‘refereeing through our contacts’ (*TJ* 14[2], c. mid-2000, inside back cover), and the magazine was proudly described in 2005 as ‘AiG’s peer reviewed science journal’. (*Answers Prayer News*, Apr. 2005, 15) At first I thought this unconscionable, but later realised that AiG is using terms like ‘refereed’ and ‘peer reviewed’ in a highly specialised sense, the ‘referees’ and ‘peers’ presumably all being creationists!

Outside their fields?

[A]ll scientists are laypeople ... outside of their field. (*Creation*, Jun. 2001, 35)

It is often alleged that AiG authors stray beyond the boundaries of their expertise, and with this charge in mind I examined all three issues of *TJ* published during 2005. In general, well over half of each journal is comprised of various ‘overviews’, ‘viewpoints’, ‘papers’ etc. by authors whose qualifications and brief biographies are appended to their articles. (By some strange quirk of fate, all of these authors are male.)

When I began this exercise I was trying to identify authors who were clearly writing outside their fields. However, after a preliminary run-through, I decided it would be much easier to identify authors who clearly wrote *within* their fields. I’ll confine myself here to the 20 or so articles principally concerned with the natural sciences.

TJ Volume 19(1)

Peter Line, author of two articles on the ‘fossil evidence for alleged apemen’, has an undergraduate major in biophysics and a Master’s degree and PhD, both in neuroscience, all from unnamed universities. (42) This topic looks like paleoanthropology to me. Are neuroscientists supposed to know a lot about paleoanthropology?

Carl Wieland, the founder of *Creation* magazine, has MB BS degrees from Adelaide University. He’s writing here about ‘mitochondrial Eve’, but why? He’s certainly not a geneticist and he hasn’t even practised medicine for the last 20 years. (59)

‘Can recombination produce new genetic information?’ asks author Chase W. Nelson. Nelson is ‘a high school junior with a particular interest in biology as it relates to evolutionary theory. He often gives talks at his [unnamed] school’s Fellowship of Christian Athletes on topics ranging from Genesis to Christian love.’ (64) I’m all for encouraging the young but is this really the best that the ‘world’s premier refereed creation publication’ can do?

Lawson L. Schroeder tells us all about ‘a possible post-Flood human migration route’. Is Schroeder an anthropologist, an archaeologist or at least a geographer? No, he’s a dentist. (72)

John Hartnett might be the goods. The Physics Department at the University of Western Australia (UWA) awarded him a BSc (Hons.) in 1973 and a PhD with distinction in 2001. He’s published more than 45 papers in refereed scientific journals and his current research interests include ultra-low-noise radar and ultra-high stability microwave clocks. Hang on, what’s this at the end of his bio? — ‘This work or the ideas expressed are those of the author and do not represent those of UWA or any UWA research’. (81) What’s your topic here, John? ‘A creationist cosmology in a galactocentric universe’, eh? ‘The observations that place the earth near the centre of the universe are consistent with God’s focus on mankind.’ (73) Well, John, if you say so — but I’d rather hear it from an astrophysicist.

David A. DeWitt is an associate professor of biology and the director of

the Centre for Creation Studies at Liberty University in Lynchburg, Virginia. (96) (How’s Jerry Falwell these days, David? — you know, the founder of Liberty University and co-founder of the defunct Moral Majority.) DeWitt received a PhD in neurosciences from Case Western Reserve University, Ohio, but here he’s considering whether ‘a jaw muscle protein mutation [led] to increased cranial capacity in man’, which I hope doesn’t overtax his knowledge of genetics. And I note that his references include a couple from that well-known science journal *TJ*.

Bill Worraker, BSc (Hons.) in physics and PhD in engineering mathematics (University of Bristol, UK) specialises in fluid flow phenomena. He argues in his paper that: [e]vidence from [our] galaxy centre suggests that the contents of the region may be much younger than uniformitarian [ie, mainstream] scientists believe’. (97) We’re getting closer here, as Bill is also an astronomer – an amateur, it’s true, but I guess it’s better than nothing. (106)

Jerry Bergman holds various degrees in fields such as biology, chemistry and psychology, his highest qualification being a PhD in measurement and evaluation, minor in psychology, from Wayne State University, Detroit, Michigan (1976). His (to date unchallenged) entry in Wikipedia notes that he was once denied tenure at an institution ‘because of problems with the standard of his scholarship’. The entry continues:

In 1992 [Bergman] received a PhD in human biology from Columbia Pacific University, San Rafael, California. This degree is legal, but the university faced accusations that it was a diploma mill and had its accreditation removed in 1997.

Bergman’s *TJ* article is entitled: *Are “defective” knee joints evidence for Darwinism?* (107) He is not a knee specialist, nor does he have the paleoanthropological background to make authoritative pronouncements about the evolution of the knee, but he seems to have some relevant training in biology and biomedical science. However, he draws on several creationist sources and I am extremely

doubtful whether this piece would be accepted by any other 'scientific journal'.

TJ Volume 19(2)

Alex Williams has two articles here about the *'inheritance of biological information'*. Williams holds a BSc in botany from the University of New England and an MSc (Hons.) in radioecology from Macquarie University. He also has various theological qualifications. Given his interest in botany, Williams must have received some training in genetics, but look at the scope of his project: *a 'new understanding' of inheritance 'needs to be based on biblical creation' etc.*; *'... Darwinists [cannot] come to grips with the reality of biological information because they reject the idea of purpose'* (29) Sorry, Alex, but even your rising to the giddy heights of honorary botanist at the Western Australian Herbarium doesn't quite cut it.

Jerry Bergman appears again, this time asking, *'Can evolution produce new organs or structures?'* (76) He advances an argument based around the concept of 'irreducible complexity' which neither he nor anyone else can sustain. In terms of qualifications, he is a biologist, but is his training extensive enough to bear the weight of his sweeping anti-Darwinian conclusions?

Charles Soper is a renal physician (and ex-missionary). (95) He seems perfectly entitled to write about *'the paradoxical urinary concentrating mechanism'*, but is certainly not entitled to present this mechanism as *'an excellent example of "irreducible complexity"'*. However, at least Soper seems to be writing in his field.

Pierre Jerlstrom, a PhD in molecular microbiology from Griffith University (and also co-ordinator of the *TJ* editorial team) and Henry de Roos, an agricultural scientist-cum-biochemist, join forces in an article demonstrating that an alleged plesiosaur carcass washed up on the Nova Scotia coast was actually the remains of a basking shark. (109) While in my opinion both authors are writing outside their fields, it probably doesn't matter too much as the article seems to have little or no relevance to creationism.

At last, a palpable hit! John K.

Reed has a PhD in geology and actually writes an article about geology. (119) Unfortunately, Reed is also the geology editor for America's *Creation Research Society Quarterly* and his paper trumpets the virtues of rescaling the geologic column from its present 4.5 billion years to — oh, I don't know — call it 6,000 years, give or take. You see, the Mesozoic and Cenozoic Eras could become the Recesive Deluge and Postdiluvian Eras respectively. Looks much better, doesn't it?

TJ Volume 19(3)

A number of authors reappear in this volume, still straying beyond their fields of expertise eg, Alex Williams and John Hartnett. Hartnett's conclusion to his *'Cosmological expansion in a creationist cosmology'* is worthy of note:

...[I]t would seem we have a universe that places our galaxy at the centre of an enormous spherically symmetric distribution with all others speeding away from us. This actually is due to God having stretched out space like a curtain with the galaxies tied to it. (101)

Carl Wieland MB BS treats us to a lecture about ice-cores and the age of the earth, but at least this time he calls in a couple of atmospheric scientists, Michael Oard and Larry Vardiman, to help him. (51) Oard happens to serve on the board of America's Creation Research Society, while Vardiman works at the Institute for Creation Research Graduate School in California. Wieland has a second article answering objections to creationist *'dinosaur soft tissue'* experiments, ably assisted by David Menton, a biology PhD and speaker with AiG, USA. (54) One would like to think that former family doctor Wieland was not the primary author of these short papers, but then, one would like to think a lot of things.

Jonathan Sarfati writes on *'plant death in the Bible'*. (60) You'll be happy to learn that *'plants do not die in the biblical sense'*, and that the appropriate qualification for telling us this is evidently a PhD in physical chemistry. Botanists need not apply.

Michael Oard (retired meteorolo-

gist), John Hergenrather (bachelor's degree in geography) and Peter Klevberg (Bachelor of Engineering Science) combine their talents in *'Flood-transported quartzites – east of the Rocky Mountains'*. (76) Where's the geologist?

Justin K. Taylor writes about *'the speed of matter'* in relation to the problem (for creationists) of distant starlight. (91) Is Justin an astrophysicist? Actually, he's a student of mathematics and physics at a US university. But he is *'an amateur astronomer and plans to study astrophysics in graduate school'*. Good luck, Justin.

Finally, veteran creationist Royal Truman, with a PhD in organic chemistry from Michigan State University, presents an article called *'The ubiquitin protein: chance or design?': 'Probabalistic calculations suggest evolutionary processes did not produce the known functional sequences of ubiquitin'*. You didn't convince me, Royal, but you do get a great big elephant stamp for sticking to your field.

Conclusion

With the best will in the world, I can identify only a handful of authors who are clearly qualified to write the articles presented in the 2005 issues of *TJ*. The publication is certainly not a 'refereed scientific journal' in any meaningful sense of the term, and to make such a claim seems misleading and contemptible.

AiG, of course, sees things rather differently. Jonathan Sarfati has announced that *'... the [AiG] ministry's axioms are the propositions of the Bible, not the theories of fallible scientists.'* (*TJ* 12[2], c. mid-1998, 150). And *Answers Prayer News* of Jan 2006 (16) warns us of our fate should we humanists, skeptics and sundry malefactors continue to spread our *'evolutionary propaganda'*, especially among school-children:

Jesus said: 'But if anyone causes one of these little ones who believe in me to sin, it would be better for him to have a large millstone hung around his neck and to be drowned in the depths of the sea.' (Matthew 18:6)



Merchandising God: The Pope Tart

God, mammon and the Internet

The following scene appeared in a first series episode of *The Black Adder*¹, when dogsbody Baldrick's plans really were "cunning".

Baldrick: *Moving on to relics, we've got shrouds, from Turin; wine from the wedding at Cana; splinters from the cross (his finger gets a sliver from one of the splinters); and, of course, there's stuff made by Jesus in his days in the carpentry shop: pipe racks, coffee tables, coat stands, bookends, crucifixes, a nice cheeseboard, fruit bowls, waterproof sandals... (picks up a piece of wood that's partly carved) Oh, I haven't finished that one yet.*

Percy: *But this is disgraceful, My Lord! All of these are obviously fake!*

Edmund: *Hah, yes!*

Percy: *But, but how will people be able to tell the difference between these and the real relics?*

Edmund: *Well, they won't! That's the point!*

Percy: *Well, you won't be able to fool everyone! Look (he takes a red cloth from his sleeve): I have here a true relic.*

Edmund: *What is it?*

Percy: *(unwraps the cloth) It is a bone from the finger of Our Lord. It cost me 31 pieces of silver.*

Edmund: *Good lord. Is it real?*

Percy: *It is, My Lord. Baldrick, you stand amazed.*

Baldrick: *I am — I thought they only came in boxes of ten.*

Relics

From holy handkerchiefs to sacred socks, relics are artefacts attributed to deceased religious figures. The label covers a broad range of memorial articles, usually classified into three groups.

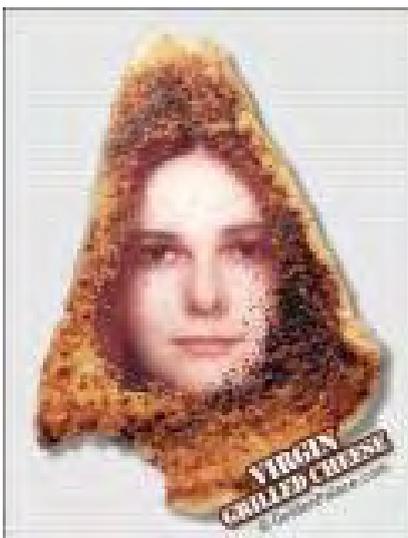
First Class Relics include physical remains, such as the bones or hair of a saint.

Second Class Relics are the possessions of an iconic figure, the objects intimately associated with them. For example, the 'Veil of Veronica' is a sacrosanct scarf, supposedly used to wipe the sweat from Jesus' brow as he carried the cross, imprinting his image on the cloth.

Third Class Relics are Do-It-Yourself relics, items that are sanctified when they have touched a deceased saint; or items that have a homeopathic holiness, having been brought to the shrine of a saint.

Many churches still venerate relics as commemorative objects, and, like talismans, they are often credited with miraculous powers, such as the ability to heal or to bring good luck.

Thousands of alleged relics are in existence. A veritable Frankenchrist could be resurrected from all of the Jesus relics alone; bones, hair, teeth, tears, blood, umbilical cords, clothes and shrouds. The Vatican is reluctant to validate relics and who can blame them, when there are often multiple claimants? There are at



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least three Holy Prepuces in existence... yes, the foreskin of Jesus. Although, this matter was settled when C17th philosopher Leo Allatius convincingly argued that the true Holy foreskin ascended into Heaven with Jesus, and formed the rings of Saturn².

Reputedly, there are thousands of fake nails from the True Cross. There are so many alleged pieces of the crucifixion cross that C16th Humanist Erasmus is credited with two unpius punch lines;

1. *Jesus must have been crucified on a whole forest, or,*
2. *there are enough pieces of the cross to build a ship.*

As Baldrick's con job suggests, the sale of fake relics was big business during the medieval era. Thomas Serafin, of the International Crusade for Holy Relics, cites this little yarn:

During the Middle Ages, a travelling monk, hoping to purchase a saint's relic for his monastery, found little success and returned home disappointed. Luckily, he soon encountered a merchant who offered to sell him the skull of John the Baptist. The monk was dumbfounded. Hadn't he just seen the skull of St John in a church during a recent visit to France? "That was the skull of St John when he was a child," explained the merchant. "This is his skull when he was an adult."³

This reads like skepticism, but Serafin still believes in the existence of "legitimate relics" and is a self-professed "Knight of the Last Crusade for Holy Relics". Their quest: *attempting to revive the Cult and veneration of Holy Relics (through exhibits, retreats and conferences) and rescuing and protecting Holy Relics from profanation and neglect. They seek to: continue to help locate and rescue genuine relics that have fallen into pawn shops and occult stores and bring to the attention of the local Ordinary (Bishop) any Catholics*



You have nothing to lose but your suds

selling relics in stores, mail order, or the Internet.

Many churches still house these supposedly 'legitimate' relics, and in these surroundings, they hold credibility for the believer. These churches are unwilling to authenticate their relics using dating methods; not because this would discredit their claims, but this would damage these fragile goods! While the Vatican still tacitly approves of the display of relics, they oppose the sale of sacred items; so much so, that they have a name for the act: simony. But this rule only extends to First and Second Class relics. So, with these restrictions in mind, how do we merchandise God today?

Religious apparitions seem to form a Fourth Class Relic category, replacing the Holy Grail as a modern-day beacon for the faithful. In popular usage, apparition refers to a broad range of miraculous phenom-



Virgin of the underpass

ena, including: physical 'materialisations', ie, reported visions of Jesus or the Virgin Mary (but never God!). An apparition can also be the manifestation of an iconic figure through a statue or image, eg, a weeping statue of the Madonna, oil seeping from the image of a saint or 'bleeding' stigmata. An apparition can also be an illusion, an object perceived to bear the likeness of a religious figure. For example, the 'Nun

Bun', a cinnamon bun that 'resembles' Mother Theresa (for an excellent metamorphosing image, visit: www.indiana.edu/~jkkteach/P335/nunbun.html). Ironically, on Christmas day 2005, the Nun Bun was stolen from the Nashville, Tennessee coffee shop where it was displayed. The bun and thief are still at large.

Pareidolia

To the skeptic, this latter category is known as pareidolia. This term refers to the phenomenon whereby a vague, random stimulus is perceived to resemble a specific, recognisable form, usually an animate or iconic figure. Whether we see a face in the clouds or a shape in the tea leaves, our instinctive ability to respond to pareidolia is the whole basis of the Rorschach ink blot test (although it doesn't necessarily reveal our deepest psyche. This psychological analysis is an interpretation of an interpretation).

Infamous examples such as the 'Face on Mars', the 'Pete Townshend potato' and the 'Bob Hope potato chip' confirm that this phenomenon is by no means restricted to religious themes. Perceiving pareidolia is intuitive profiling, our propensity to search for the familiar in the unfamiliar. Carl Sagan links the facility to a survival mechanism⁴. We recognise similarities and often superimpose a mental image onto a visual image. We discover patterns in nature and match facial features with familiar faces. Think about the times you've temporarily mistaken a

Merchandising God

stranger as your boss in a crowded place, when you've taken a sickie!

To illustrate the random nature of pareidolia, our good mate Phil Plait (the Bad Astronomer) writes about his experience of having a shower with Vladimir Lenin. On an otherwise normal day, Phil was washing away his sins. Upon stepping out of the shower, his eyes were drawn to the shower curtain. What he saw sent a shiver down his spine; *"There was a face in the shower curtain, looking directly at me"*. Unbeknownst to Phil, he'd had a voyeur during his shower, none other than the revolutionary Lenin. It was a communistic miracle! Did the Bolshevik leader bring a message of socialism to this consumerist society? Was he bringing the Iron Curtain to the shower curtain? Phil quickly admits that this was no paranormal event but a pattern formed by water droplets on the shower curtain. He vows not to set up a bathtub Lenin shrine but marvels over the uncanny likeness, *"and let me tell you, my Lenin face is the best example of this phenomenon I have ever seen. Usually, the resemblance people see is vague at best"*. For more of this tale, visit: <http://www.badastronomy.com/bad/misc/lenin.html>.

While pareidolia is an intrinsic phenomenon, something we're 'hard-wired' for, the observer's reactions can differ greatly. Bob Carroll states that, *"most people recognize illusions for what they are, but some become fixated on the reality of their perception and turn an illusion into a delusion"*⁵. While some were amused at the resemblance the sweet pastry bore to Mother Theresa, others made pilgrimages to the 'Virgin Mary' who 'appeared' on the wall of the Kennedy Expressway, Chicago, in 2005. In their thousands, followers kept vigil and paid homage with prayers, candles and flowers, weeping before the image and disrupting traffic. Until council staff painted over the salt stain. Pareidolia is truly in the eye of the beholder. While many interpreted the hooded shape as the customary pose of the



The Nun Bun

Madonna, others likened the stain to a certain part of the female anatomy!

We had our own Antipodean visitation in 2003, a Marian apparition at Coogee Beach headland. The "Coogee Madonna" was an optical illusion, sunlight reflecting off a crook of a fence post, the shadow perceived by some as the veiled image of the Virgin Mary. The cliff turned into a shrine, the faithful waiting in the afternoon sun, watching for the image, the surfers watching them. Some years on, a group is lobbying to have a church built at the beach side, but the Catholic Church in Sydney is less convinced. The unusual outpouring of emotion from Sydneysiders has since been linked to grief of the Sari Club bombing in late 2002, and social anxiety resultant of the ongoing Iraqi war.

Saviour as savoury

True to the Bible, Jesus returned to Earth, just not in the form that everyone expected. Jesus 'appeared' on a flour tortilla in New Mexico in 1977 (near Roswell, if anyone wants to dabble in confirmation bias). Although the 'apparition' looked like a



Crucified Cheetos

simplistic, rubber stamped image, the owner enshrined it and even to this day, thousands of the faithfully credulous make the pilgrimage to view this 'miracle'. This visitation popularised religious pareidolia. In quick succession, Jesus made appearances on foodstuffs throughout the US. But for a while, the occurrences lessened, or at the least the media fascination ebbed. However, with the emergence of *eBay.com*, religious pareidolia has made a fervent resurgence. In the beginning, God created a sandwich.

In 1994, Diana Duyser of Hollywood, Florida, made a fried cheese sandwich, but this wasn't any old sandwich:

When I took a bite out of it, I saw a face looking up at me, It was Virgin Mary starring (sic) back at me, I was in total shock, I would like to point out there is no mold or disingration (sic).

Duyser resisted eating any more, and preserved the sandwich in a clear plastic box with cotton balls, keeping it on her night stand. She claimed that the divine sandwich had brought her "many blessings" over the years, including a casino windfall of \$70 000. Despite the divine powers of the sandwich, Duyser generously decided to "share this with the world" or the highest bidder. And so, a decade later, she listed the sandwich on eBay:

www.goldenpalaceevents.com/ebay_archives/grilledmary01.html. The bidding quickly rose to \$28 000 before eBay disqualified the auction. They reinstated the auction when it became apparent that they would receive their listing fee and commission, *"There's nothing to indicate that the seller isn't willing to give up this cheese sandwich to the highest bidder"*, said a spokesperson for eBay. The item generated phenomenal worldwide publicity, receiving about 2 million viewing 'hits' before it was sold for a whopping \$28 000 to publicity hunters, online casino Goldenpalace.com.

Goldenpalace.com is famous for collecting notorious online auctions.

With a penchant for paranormal pareidolia, they also purchased the Weeping Jesus Rock for \$2550, the Holy Pretzel for \$10 600, the Pope's Hat Dorito Chip for \$1209, the Holy Pierogi: Fried Image of Christ for \$1775 and the Jesus Shower Plaster for \$1999.99. Milking the Cheese sandwich for all it's worth, Duyser also listed the "Official Holy Pan that made the Grilled Cheese Sandwich". To add to their collection, Goldenpalace.com snapped this up for a cool \$5999.99. Surely the kitchen sink will follow. (For other bizarre purchases, visit: <http://www.goldenpalaceevents.com/auctions/>)

Is this a good example of pareidolia? While we don't have any genuine images of the Virgin Mary, we have many depictions of her. From a cultural perspective, these portrayals form our modern ideal of purity. However, the image on the sandwich isn't of a demure woman with her gaze cast downwards; the caricature-like image shows a flirty, outward stare that has been compared to Marlene Dietrich, Carole Lombard or a Kewpie doll. The image on the sandwich doesn't resemble our 'idea' of how Mary looked, but pareidolia is often suggestive. Duyser either believes that this 'is' the Madonna, or she wants us to see it her way. Mother Mary or Mother Nature, whoever made this yeasty visit, it's a curious phenomenon that deserves investigation. Religious icon or movie star, is the image real or a hoax?

Typically, pareidolia is imperfect. The 'Face on Mars' doesn't resemble all of the natural features of a real face, it was a vague protrusion, with an indistinct 'mouth', 'nose' and 'eyes'. Our Lady of Watsonville, an 'image' of the Madonna in Watsonville, California, is an oval discolouration on a tree, a 'stooped' shape that could be a penguin as much as Mary. However, the Cheesy Virgin is an uncharacteristically distinct and sharp image. I had the good luck to examine the sandwich with CSICOP Investigator Joe Nickell at last year's TAM 3 in Las

Vegas. The supposedly ten-year-old toast was framed, behind thick glass and came complete with its own security guard, the 'relic' on loan from Goldenpalace.com. Joe is reluctant to accuse Duyser of any trickery, but I'm not. But does opportunist equal con artist? Any further commentary would necessitate a few scientific tests; until then it remains a curdled piece of pop culture.

D-I-Y Relics for fun and profit

The Virgin Mary Cheese Sandwich became a great gimmick. Ebayers began capitalising on the notoriety of the Holy Sandwich, using the name to generate search results for their more secular listings.

L@@K! Bicycle and Virgin Mary toast!

Virgin Mary CD of Elvis classics!

Virgin Cheese Sandwich leather coat — preloved

Imitation is the sincerest form of greed. The fiduciary success of the sandwich had spawned a new industry of 'simony' that was becoming known as E-Simony, the 'trafficking' of 'relics' through internet auction houses. Within days of the sale of the Holy Toast, a friend called. Had I heard about the Holy Cheeto? A search online revealed this lame piece of pareidolia. A fellow was auctioning a "Cheeto" chip that supposedly resembled "Jesus' legs on the cross". In fact, the chip resembled nothing more than it was; two Cheeto chips melded together. The owner had just undergone heart surgery and, with his diet choices, was well on the way to his next operation.

When I walked in the convent (sic) store, there was a line because everyone was trying to hit the jackpot for the lottery...I went to wait in line and was standing near the bag of chips. I was looking at the chips and one bag of Cheetos caught my eye. I decided to buy the bag of Cheetos since it stood out from the rest...I looked in the bag of Cheetos and found this piece of Cheeto that was shaped like legs... Since this was

found the night before Easter, I believe that this is the legs of Jesus. I believe that the legs represent him walking and carrying the cross when he was crucified and that it is a sign that he will be back. I am recovering from surgery and I believe that he was watching over me when I was taking a walk round the block and to make sure that I got home safely.

In the small print, the owner admits that the 'legs' are "novelty only", but, "I only asked (sic) that you bid seriously on this auction". Strangely, people were bidding on this ridiculous 'relic'. Was this kitsch value or real belief? And what were people thinking about the recent spate of pareidolia? What does it take to make skeptics of the credulous?

Snap, Crackle, Pope

My idea was a pre-emptive strike against pareidolia. In the religious world, the most recent and notable event was the death of Pope John Paul II. This is the kind of significant event that believers link to apparitions, so this was a believable theme. The death of Mother Theresa triggered a plethora of 'miracles', the path to beatification. But where was I going to find a genuine piece of pareidolia, on demand? I would have to fake it. While we might think that apparitions are often contrived, like 'weeping' images or 'bleeding' statues, Joe Nickell states that "deliberate simulacra hoaxing seems rare"⁶. While Joe once expertly imitated the Shroud of Turin in an experiment, (the Shroud of Bing...Crosby), I am no forgery artist.

I decided that my medium would be a Kellogg's Pop Tart, ordained to be the 'Pope Tart'. So, I had the witty name but no 'apparition'. How would I make the 'relic'? I made some hopeless attempts at fashioning a believable image. Like a malevolent Martha Stewart, I tried to 'sketch' an image onto the tart. I only succeeded in cracking the brittle surface. Ingeniously, I dampened the next tart, to press the image onto the surface,

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but it became too soggy. Then it dawned upon me...I didn't have to do a thing. Autosuggestion is part of the 'miracle' of pareidolia, and people would convince themselves! Confirmation bias would do the rest. I took a few digital images of an untouched pop tart (the last one in the pack after my fumbling experiments). I decided to use a blurry image, to add an element of uncertainty. hilariously, the photo had an 'orb' in the right-hand corner. I positioned this next to a photograph of John Paul to subtly coax people to perceive similarities. The natural markings of the tart, when studied closely, appeared to reveal an indistinct face-like shape. Although, it looked more like Edvard Munch's *The Scream* than the Pope!

And so, I listed the following auction to the 'Relics' category of eBay:

The Pope Tart

Papal Pop-Tart

Genuine modern-relic!

Bears likeness of His Holiness Pope John Paul II!!

We have all heard of the recent spate of religious icons, the Virgin Mary Grilled Cheese Sandwich, the Madonna and Child Pretzel and the more recent Holy Cheeto. To be honest, I was skeptical about it all. I had pinned the owners as either out to make a fast buck or just delusional! Then I remembered the words of Christ: "Why do you doubt, O ye of little faith?" (Mt 14:30). I suddenly understood the true purpose of this phenomenon! This is God's way of reaching the modern person! In today's jaded world, where people are turning their backs on the Lord, He has found a solution! God is trying to reach people through the simple, the mundane, the ordinary. If people won't come to Him, He will appear to them...and in a form they can truly stomach!

This week has seen the passing of our Holy Father, Pope John Paul II. The faithful still keep vigil over his body, pilgrims praying at his tomb. The Lord said, "I am with you always even to the end of the world" (Mt



The miraculous tart

28:20). He has returned our Pope to us, miraculously, in the fashion of Jesus. He has been resurrected, in a most humble form. For breakfast this morning, I had two Kellogg's Pop Tarts, French Toast flavored. I had set the toaster to low. When I pulled the Pop Tarts from the toaster, I was astonished to see that one Pop Tart bore the image of His Holiness! Not only is the picture of the Lord's representative on Earth but it is an image of the Pope looking youthful and more refreshed. The other Tart was secular. I wept when I saw this image. The morning sun shone through my kitchen window, illuminating this holy image. It was an ethereal, religious moment for me and is proof that there is an afterlife. Through transubstantiation, we receive Christ, and now, through this breakfast bread, we receive His Holiness. And now I want to share my blessed breakfast with the world!

Because I have been blessed to have owned and toasted the papal tart, I now feel that I can pass it on. I am not out to make money, merely to share this wondrous object. So, I am starting the bidding at the low, low price of \$1!

To His Holiness, Requiescat In Pace. To you, peace be with you and happy shopping!

I emailed the seller of the Holy Cheeto, complimenting his 'relic' and giving a plug to my own auction.

What a remarkable item! I hope it goes to a deserving home. I too, have been blessed with a visitation from our Lord. See: [cgi.ebay.com/ws/EBayISAPI.dll?ViewItem&item=6171209997](http://cgi.ebay.com/ws/ eBayISAPI.dll?ViewItem&item=6171209997)

The seller responded with the following sage advice.

What a great auction. I think you should write a press release for it. That's what I did with my auction. Best of luck to you.

Of course, there was no religious awe here; it was for money, not love. In the end, the Holy Cheeto was sold, for \$102.59, and that much too much. But how would people react to the even more obviously contrived Pope Tart?

Within hours of listing this "modern relic", the emails started flooding in. The responses ranged from amused viewers who knew the item to be a prank, to offended believers who saw me as 'cashing in on God', to frustrated viewers who couldn't 'see' the likeness and were oblivious to the humour. In what I call "Magic Eye" syndrome, guided by the auto-suggestion, some appeared to 'see' an image in the pastry, because they thought everyone else could!

eBay allows for question and answer interaction between the seller and potential bidders. I received a flurry of questions from amused observers. Here are some of the exchanges:

Q: *What flavor is the Pope Tart? I'm hungry!*

A: *It is French Toast flavored. However, if you are hungry, I would counsel you purchase something less expensive and less Holy to masticate.*

Q: *Why must we not eat the Pope tart?*

A: *Well, it is a Holy Relic. Would you eat one of Jesus' finger bones or a splinter of the Holy Cross? Some would call this sacrilege. However, purchase it and you can bloody well do what you like with it! Toast it, nibble it, invert it, sacrifice it, desecrate it... at your will.*

Q: Greetings! I think that if you look very closely, you will see that this actually looks like Pope John Paul the FIRST the predecessor of JP II. The large Roman like nose, and outline of eyeglasses. Would you not agree that this is a sign from above for the cardinal electors?

A: I strongly disagree with your assessment. How can you not see the clear resemblance to PJP II? The strong jawline, the thin lips, the high cheek bones, the dimple and well placed ears! There aren't any spectacles...that is part of his liturgical vestments! I believe the Pope's return is a strong ecumenical message for religious unity and world peace. Perhaps the French Toast flavor is a sign we are in for a Francophone Pope.

Q: I was a fallen Catholic but seeing this I have refound my way. As soon as I saw this food I prayed and the LORD told me to give exactly \$3.27. It's good to know I'm not the only lost soul crying out from the dark of a damned world.

A: Peace, Brother. Your story touched me deeply, as I was once a lapsed Catholic. Recent events have brought us all back to His fold. Now, I truly feel a divine presence watching over me, even at breakfast. Thanks for bidding!

Q: THANK YOU!!! I have had a crappy several months and this droll item has, and still continues, to give this tired old Jew boy a hearty guffaw. Bye the bye — hope it is the AB of Paris — Jew ya know!!!!

A: Guffaw is a splendid word that deserves a revival. I aim to please... and I have scalped Oasis tickets to pay off. ;)

Although, not all observers were in on the joke.

Q: I think your disgusting (sic) to be selling something such as this. Personally, I think you're on something.

A: Sadly, not on anything. Wish I was though... Why does this auction attract all of the fundamentalists?!

Q: you quoted - "I am not out to make money, merely to share this wondrous

object." If this were so (true) then why merely share this type of idolatry at ebay?...of all places really...ebay! this is so sad and I hope one day you fully understand that by making money off of what you say is from God... is wrong... remember when Jesus knocked the money off a table claiming to be from God and his house (Church)... maybe next week you'll have sugar pope cereal... the way for kids to stomach more sugar coated lies.

A: Bloody Protestants! Anyway, look at the trouble Jesus landed himself in, when he behaved in that wilful manner! 'Sugar pope cereal'? You have a devious, sacrilegious mind! As for idolatry, G.K. Chesterton said; "Idolatry is committed, not merely by setting up false gods, but also by setting up false devils."

Q: His Holiness chose to visit in his image and your (sic) selling out this miracle.

A: You'd think he'd do a better job too. It doesn't even look like him.

The following appeared on a blog; an amazing unity of gullibility and fad dieting:

The seller, obviously a scam artist, quotes the bible in order to convince the naïve ebay browser he believes this is god's way of reaching out to a faithless world. Right. As if something so full of carbs could ever be holy.

Why, even Father Allen could see the joke!

I was relieved after I saw the auction. I read the title and thought it'd be a Catholic personals ad!

Over the course of the auction, I posted a new update every day.

NOT INTENDED FOR CONSUMPTION

Important Update! Many have sent queries asking if the Immaculate Tart foretells the 265th Pope. The Archbishop of Florence states: "The new pope has already been chosen by the Lord, we must only pray to know who it is."

If you want my tip, given the French

Toast flavor of the relic, I would venture that the Pope elect may be a Francophone.

More Pontiff Presaging... I postulated yesterday that the Immaculate Tart may portend the pontiff-to-be. The Holy Tart of Berkeley is French Toast flavored and thusly, I deduced that the new Pope may be a Francophone. It now appears that Cardinal Jean-Marie Lustinger, former Archbishop of Paris, is the prelate tipped to take the title, according to spokespeople and bookies. Tres bien! The smoke is still black... Stay tuned.

Okay. So I was wrong. It should have been the Holy Strudel. I've never claimed to be psychic (at least, not in this article!).

Ted Gwin, my accomplice throughout this prank, submitted the following (under the monicker Right Reverend Teddy, of Cash of God Ministries):

SERMON ON THE TART

1 And seeing the multitudes he appeared to them upon a TART and when he was toasted his bidders came unto him.

2 Blessed are the TART bidders because theirs' is the kingdom of E-bay.

3 Blessed are those who are outbid for they may re-bid for the TART.

4 Blessed are they which do hunger and thirst after the TART: for they shall be satiated.

5 Blessed is the winner: for they shall obtain the holy TART.

6 Blessed are the postal workers: for they shall deliver the TART.

7 Blessed are they whom are persecuted for the TART's sake: for theirs' is the kingdom of E-bay.

8 But I say unto you, that ye resist not generic TARTS: but whosoever shall smite thee on thy right toaster slot, turn to him the other.

9 Take heed that ye do not your alms before breakfast, to be seen chowing forth : otherwise ye have no reward of your TART which is in thy bathroom.

10 Toast not, that ye be not toasted.

Merchandising God

By this time, the auction had only days before it would end.

Armageddon!

We near the auction endtimes...

Bid today!

I enjoyed blending religion and commercialism. Then, in a surprising and hilarious turn, I received the following email.

The Library of Congress would like to archive this auction record as part of the Library's research collections documenting the Pope and information about him on the Web.

Displaying no critical thinking, the Library of Congress legitimised my prank! Of course, I said 'yes', completed the online consent form and promptly posted a final note to the auction web site.

Congress Approves Tart

I have been formally approached by the United States Library of Congress whom wish to archive information about my tart for their research collection, to document the life of Pope John Paul II. This Library "preserves the Nation's cultural artifacts and provides enduring access to them." I am proud to relay that I have agreed to this honor. The tart shall live on, contributing to the education and scholarship of this nation!

Get your piece of tart history today!
Bid now!

The result

In a country that adores its pop culture, The Pope Tart became instant folklore. The 'relic' quickly became the gossip of message boards, blogs and mailing lists. I was called a 'scam artist', "a liar", "evil", "insane", "crazy", "loony", "funny", "a genius" and "sacrilegious". The Tart even became immortalised in the poem, *The Ballad of the Cafe Cheezus* by Angus O'Mann, 'Fast Food Poet'.

*They traveled there from many lands,
some distant and some odd,*

*To see the Holy Mackerel and the Glory
Be to Cod.*

*To see the famous Pope Tart and the
Passionfruit of Christ.*

*The armored car came once a day, then
started coming twice.⁷*

I did two interviews about the 'relic', and had to decline two others, due to work commitments. One interview was with qtelevision, an online 'queer' TV station. After overcoming their initial surprise that I was female, rather than male (an intriguing assumption that most people made), the interviewer asked me, "are you a Catholic?" I broke the ice with the unexpected reply, "No, I'm an atheist". I went on to explain the concept of pareidolia, urging the viewers to think about the natural causes of these phenomena.

In the end, the Pope Tart sold for \$46. Measly, in comparison to the six figured sum of the Virgin Sandwich, but extravagant in comparison to a \$4 pack of Pop Tarts. Not bad, considering it was an absolutely unconvincing piece of pareidolia and a blatant hoax! Furthermore, I didn't engage in fervent promotion of the Pope Tart, unlike the press releases of the Holy Cheeto or the worldwide publicity of the Virgin Sandwich. I simply emailed the listing to my usual address book and, in the contagious nature of the Internet, the word spread. Before eBay removed the listing, a routine act after 90 days of the auction closing, the web site had received just over 20 000 hits. Amusingly, Internet folklore believes the Pope Tart was purchased by GoldenPalace.com.

In the end, the joke was on me. The winning bid, like the auction, was a hoax. This suited my ethical purposes well. And so, I contacted Russell Rush, radio DJ for KXXM, San Antonio. Russell was the second highest bidder for the Tart. I offered to donate the Tart to the radio station, as a 'testimony to human gullibility'. He accepted.

Did the Pope Tart succeed in making people more skeptical? Not really. The prank suggested that people can be skeptical of how convincing pareidolia can be, but not skeptical of pareidolia itself. In fact, the divine

pastry initiated more of its kind, the 'Jesus Ascension Chip', 'Jesus' face on a rock' and the 'Face of God photocopy'. The quality was of the following convincing nature.

Jesus Rock for sale. Do I have good story about it? Not really. I found it in my driveway. Picked it up, and noticed that it looked like Jesus (the dark color). Also, if you turn it upside down, it looks like Elvis with a big nose (the light color). All I can tell you is that when I hold the rock, it makes me sneeze. Kind of weird, I know.

The Virgin Mary Cheese Sandwich, as sponsored by Golden Palace, re-popularised pareidolia; a common, psychological phenomenon. It's natural for us to search for, and recognise pareidolia. It's also natural to exhibit an example to others, seeking to confirm our perception; also explaining why people claim to see something, even when they don't. What is unnatural is when we see beyond the likeness, and assign significance to it. So, the next time you see Jesus in your meat pie, masticate it, don't venerate it!

Notes

1 *The Black Adder*, Episode Three, The Archbishop. With thanks to Sup's Blackadder page for the transcription: www.geocities.com/TelevisionCity/8889/bladder.htm

2 According to the essay *De Praeputio Domini Nostri Jesu Christi Diatriba* en.wikipedia.org/wiki/Leo_Allatius

3 Thomas Serafin — www.ichrusa.com/
4 Sagan, Carl. *The Demon-Haunted World - Science as a Candle in the Dark*. New York: Random House, 1995, p.45.

5 Bob Carroll, *The Skeptic's Dictionary*. skepdic.com/pareidol.html

6 Joe Nickell, *Rorschach Icons*, www.csicop.org/si/2004-11/i-files.html

7 From the upcoming book *For Whom the Taco Bell Tolls* by Angus O'Mann. angusomann.blogspot.com/

With thanks to Phil Plait for the Lenin Shower Curtain photograph.



Greenhouse Debate and Skepticism Pt I

Some facts to illuminate an emotional debate

Following on from Tom Biegler's letter "Anti-skeptic media" in *the Skeptic* (25:3) and Mark Lawson's forum article "Red Light to Greenhouse" (25:2), I would like to discuss some of the issues Tom raises about the media "debate" on the Greenhouse Effect and Global Warming. Although this is not a paranormal or pseudo-scientific topic, I do think that it fits into the role of the Australian Skeptics to "... seek the evidence" and which "... opposes the generally uncritical sensationalism presented by the popular media".

The greenhouse debate has been hijacked, in the media at least, by "environmental alarmists" arguing with "greenhouse critics". A Skeptic should take both these positions with a grain of salt. If we are "greenhouse skeptics", which specific part of the greenhouse effect and climate change science are we skeptical of? Before we consider the debate, then, let's look at the science.

I am a physicist by training, with my research mostly in astrophysics, but about 15 years ago I had a post-doctoral position at Macquarie University working on Climate Change, specifically looking a climate records (Jones 1991, 1992, Henderson-Sellers and Jones 1992). As Trillian says in *the Hitchhiker's Guide to the Galaxy* "after all with a degree in math and another in astrophysics what else was there to do? It was either that or back to the dole queue on Monday." Actually, the climate work was an interesting digression, and I have used examples from it in teaching university physics

students. I have kept an interest in the climate scientific literature since then. I hope that I can explain some of the scientific background in such a way, that as, Tom Biegler says, the layman can reasonably expect to follow. After the science, I will comment on the public debate.

The Greenhouse Effect

The Greenhouse Effect is a physical effect that explains how the atmosphere of a planet, such as the Earth, affects the surface temperature. It is called the Greenhouse Effect by analogy with a greenhouse where the glass lets visible light in and blocks heat going out (but it is not a very good analogy as a greenhouse works by preventing the warm air escaping by convection as well as blocking the outgoing radiation (Henderson-Sellers and Blong 1989).

Basically sunlight with a spectrum peaking in the visible part of the spectrum (around 0.5 micron wavelength) heats up the Earth. The warm Earth radiates away heat energy, so that the incoming and outgoing energy balances in a stable equilibrium. The outgoing radiation, however, peaks in the mid-infrared part of the spectrum at around 10 micron wavelength. The atmosphere is transparent at visible wavelengths (except for the complicating effect of clouds, which I will come to a bit later) while it is not very transparent at mid-infrared wavelengths. As it turns out, some of the gases in the atmosphere, such as water vapour (H_2O), carbon dioxide



Paul Jones is an astrophysicist and long term Skeptic, who complains that the lack of frequent flyer seats on intergalactic UFOs makes his job much harder.

Greenhouse Debate

(CO₂), ozone (O₃) and methane (CH₄), have absorption lines pretty much filling this wavelength range. This is a big problem for us astronomers, as we need to put telescopes into space to observe this wavelength range or on high mountains to get above the atmosphere. On the mountain sites we are restricted to narrow wavelength “windows” between the absorption lines. The effect of the blocking of the outgoing mid-infrared radiation on the Earth is to make the surface temperature higher than it would be if there were none of these absorption lines.

The details of the Earth’s surface temperature are complicated by some of the incoming visible light being reflected away by the surface and by clouds, and the outgoing mid-infrared radiation being similarly scattered. Also, the surface temperature obviously differs from pole to equator. However, the basic idea still holds. If we ignored the effect of the “greenhouse gases” in the Earth’s atmosphere, the average surface temperature would be -18°C, whereas it is actually +15°C (Henderson-Sellers and Blong 1989). When people ask me what I think of the greenhouse effect, I say that it is a very good thing as it makes the Earth inhabitable!

The Enhanced Greenhouse Effect

The basic physics of the greenhouse effect has been known for over 100 years, back to John Tyndall in 1861 and Svante Arrhenius in 1896. It has also been discussed for a long time the possibility of human changes to their atmospheric levels having an effect, since the greenhouse gases are surprisingly only minor components of the atmosphere (the major components oxygen and nitrogen do not contribute). The level of carbon dioxide is around 300 parts per million (0.03 %) and the burning of fossil fuels produces carbon dioxide on a vast scale. Arrhenius (in 1896) calculated a doubling of carbon dioxide would increase surface temperature by 5°C, which is surprisingly close to the range of current, far more sophisticated models. However, the calculations of Arrhenius were very crude and were dismissed for several decades as faulty (Weart 2006) until the theory was revived in

the 1950s. As an example of this in the literature, I note an article (Plass 1959) from *Scientific American* nearly 50 years ago, which discussed the measured rise in carbon dioxide and climate change. The article predicted “*We shall be able to test the carbon dioxide theory against other theories of climate change quite conclusively during the next half century*”.

During the 1960s and 1970s, in the era of spacecraft exploration of the planets, the atmospheres of Mars and Venus were studied in detail, and it was recognised that the very high surface temperature of Venus (740 K) was due to the large greenhouse effect of the dense carbon dioxide atmosphere plus water vapour (Weart 2006).

Increasing Greenhouse Gases

There is now a very good record of instrumental measurements of the level of carbon dioxide going back around 50 years, showing an increase from 315 to 380 parts per million (ppm) over 1958 to 2004, with other less direct measurements showing the level before 1800 was around 280 ppm (IPCC 2001). This is in good agreement with what you would expect from the industrial emissions and other human activities such as net deforestation (where the organic matter stored in the plants is released). Some of the extra carbon dioxide has dissolved in the sea water, rather than staying in the atmosphere. There are also good measurements of increases in some other greenhouse gases such as methane.

So, is there evidence for an increase in global temperature due to this increase in greenhouse gases?

Global Warming

The temperature measured by meteorologists obviously varies with time and place, with the weather and the daily and yearly seasonal cycles, but can be averaged over time and place to provide useful comparisons of climate. In Australia, we are fairly familiar with climate changes due to the *El Nino* — Southern Oscillation (ENSO) cycle, where we talk about hot years and cool years, or more relevant to farmers perhaps, dry years and wet years for droughts and floods.

If we are looking for signs of global climate change, then it is necessary to combine data from a lot of stations spread over the world. For the statistically-minded, this should be a weighted mean since some areas of the world, like Europe and North America, have more meteorological stations than others and would otherwise bias the result. There are good instrumental records going back to around 1860. For recent years, we can include satellite data. The result, of many studies, is that the average surface temperature has increased by 0.6°C over the last 140 years (IPCC 2001) with an uncertainty of 0.2°C (see later comments on why physical scientists quote the uncertainty range). This is what we mean by global warming.

Note that the evidence for global warming is not based on the results for one place and one year — the fact that we just had a hot summer in Sydney could be just a local fluctuation, like the ENSO cycle.

Global Warming due to Increased Greenhouse Gases?

So, does it make sense that the observed global warming is due to the observed increase in greenhouse gases, given the well-established physics of the greenhouse effect?

Not so fast. There are other effects on the climate in addition to the greenhouse effect which could also have changed. The climate is a complicated system.

There has been a slow rise in confidence that increased greenhouse gases really are implicated in global warming, as more evidence accumulates, for example, as time goes on and the global temperature continues to rise, and as the understanding of the other effects improves (IPCC 2001). One of the key dates in the public awareness was in 1988, when NASA scientist James Hansen testified to the US Congress that greenhouse warming was occurring. This was arguably premature and there was a range of scientific views in the true spirit of skepticism. However, now over a decade later, the quantitative physical models show a very good fit implicating global warming due to greenhouse

gases (IPCC 2001) when both natural causes and human causes are included. There is, for example, detectable short-term cooling associated with major volcanic eruptions which put dust into the upper atmosphere which reflects a bit of the incoming sunlight. The other effects, such as variation in the Sun's output (and hence incoming sunlight) can be quantified, and cannot explain the overall warming. Most of the other effects, such as extra smoggy haze, give cooling not warming (IPCC 2001).

Future Global Warming

The same sort of models that are used to calculate the effect of historical greenhouse gas changes (and the other effects) can be used to predict the future global climate, albeit with some uncertainty. The biggest uncertainty is in how much the greenhouse gases will change — if we want to talk about climate in 2100, then it depends on the greenhouse emissions decades from now, which it is very hard to predict. (Will the world's economy be based on coal or nuclear power? How big will the world's economy be? What will the world's population be?) For this reason, different emission scenarios are modelled, varying by about a factor of 2 in greenhouse emissions in 2040 to more than a factor of 5 different in 2100 (IPCC 2001). This does lead to a wide range of projections (prediction is probably the wrong word) for 2100 of 1.4 to 5.8°C increase. The different climate models themselves differ somewhat in their assumptions, and give different results, which gives an estimate of our scientific uncertainty. If we restrict the comparison of models to the same greenhouse gas concentration (say double pre-industrial levels) then different models have a scatter of around 30 %.

Unfortunately, as we go from the global scale to predict regional effects (for the example, rainfall for New South Wales), the "state of the art" is that it is harder (but not impossible) to make very confident predictions. I say this is unfortunate because such regional predictions would be very useful in planning how to respond.

The public debate

What I have presented above is the scientific consensus view, based on the scientific literature. Much of the physics background (for example, the greenhouse effect on Venus) is contained in textbooks, and the compilation of the recent literature is by the Working Group I of the Intergovernmental Panel on Climate Change (IPCC 2001). There is actually a pretty clear scientific consensus, expressed by the IPCC (as Tom Biegler suggests may be the case). Oreskes (2004) searched the scientific literature with keywords "global climate change" and of 928 papers (1993 to 2003) 75% explicitly endorsed the IPCC view or discussed impacts or mitigation proposals and 25% discussed ancient climates (without recent, possible human induced, changes) but remarkably none disagreed with the consensus position.

OK, it is obvious that there are people who disagree with the climate consensus, but their contribution to the peer-reviewed scientific literature is much smaller than you would ever guess from the public debate. So what is going on?

Almost all the media coverage of greenhouse issues is, understandably, about the political and economic implications of any future global warming. (What would be the economic effect on Australia of global warming? Should Australia ratify the Kyoto Protocol?) I have, so far, deliberately ignored the politics and economics. People do have strong views on these, and I think the science has been pushed aside in the media by a polarisation. Environmental activists are more likely to make exciting and alarmist soundbites (Save the Earth! The Icecaps are Melting!) than the scientists, so the activists have become the de-facto spokespeople for global warming in the media (even if they may exaggerate or misrepresent the science in their enthusiasm to arouse the complacent masses). Since the debate is seen largely as a political one, there is seen to be a need for an opposing view for balance, so a greenhouse critic is also included. (I will discuss in part II why I use the

word critic rather than skeptic). I do worry, like Tom Biegler, that this sets up an emotionally-charged (artificial) battle that leads to unhelpful abuse rather than a scientific debate.

I am not being too hard on the media. They do have to be entertaining to get people to read/watch/listen, but this does give the wrong impression of how scientific debates are conducted. I fear that Mark Lawson has fallen into this trap in his article (25:2) — I think his fantasy about being eaten by a giant crocodile is unhelpful (except as a rhetorical device to associate climate scientists with crazy disaster movies) as is his emotive language ("sin", "evil", "Saintly", "heretics", "pure faith"). I will comment on his scientific arguments in part II, and make some general comments about how Skeptics should judge such scientific issues.

To be continued in the next issue.

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Proud to be Ashamed to be An Australian

There's no shame in being unashamed

The humbugonline post

My sometime co-author (Theo Clark, my firstborn) and I maintain a blog which is linked to our book *Humbug!* Those who know of the book will already be aware that it is a serious, considered and scholarly tome on informal fallacies in thinking. Our blog on the other hand, is of an entirely different genre. I quote from the header of the blog:

Using a seamless combination of both passion and restraint, we expose erroneous thinking with irony, whimsy, sarcasm, satire, caricature, and occasional breathtaking hypocrisy.

The blog address is
humbugonline.blogspot.com

I used the blog back in late December of 2005 to post on a peculiar phraseology which was at that time (and still is) becoming increasingly common in newspaper opinion columns and in letters to the editor on "highly charged" political issues. The phrase is "...ashamed to be (an) Australian", and the particular issue which caused a spike in frequency was the so-called Cronulla Riots. The extract below is from the blog post, and it is quoted in full as it provides the context for the present article.

"Ashamed to be Australian" - Deconstructed
(Posted Dec 22, 2005 at humbugonline.blogspot.com – archives for December 2005)

I have been intrigued recently by the use of the phrase "ashamed to be Australian". It seems to be popping up in newspaper columns, newspaper articles and letters to the editor with increasing frequency. I just googled

the phrase and achieved 827 hits. Scanning through the texts in which the phrase occurs indicates that there is no political or social issue, and no cultural feature of Australian life which does not make some Australians ashamed to be Australian. For every Australian ashamed to be Australian on one side of an issue, there seems to be another Australian who is ashamed to be Australian on the opposite side of the issue. I think this over-used and essentially meaningless phrase is ripe for deconstruction.

The first point to make is that it is a lame statement. It is a lame statement because it is "unconvincingly feeble", and "uninspiring and dull" (OED). The advocate who makes such a claim is usually referring to a single act of some Australians at some time which he or she finds unpalatable. His or her response to this single reprehensible act is to condemn all Australians for all time — to the point where he or she repudiates his or her nationality. Yeah right!

The second point to make is that it is a LAME statement. LAME is my acronym for "Look At Me Everybody". I believe that this is the real intent behind an "ashamed to be Australian" claim. The advocate is not ashamed at all. Far from it. The statement is disingenuous. It is a calculated attempt to position the advocate on the moral high ground. The relevant emotion is not shame, but sanctimonious pride.

Over a period of a week or two after that post, I amused myself in idle



*Jeff Clark, an educators educator, is a man who knows no shame and is not proud of it. His book, *Humbug!* is the most consistent seller on the *Skeptics* site.*

moments by carrying out web searches on some more “exact phrases”. As noted in the extract above, the phrase “ashamed to be Australian” gave 827 hits. But when I searched on “ashamed to be *an* Australian I got a whopping 9230 hits. I later searched on both “proud to be Australian” and “proud to be *an* Australian” to see how pride was going *vis-a-vis* shame. Proud Australians proved to be much more numerous than ashamed Australians. For every individual who had posted on “ashamed... Australian” there were 2.9 who had posted on “proud... Australian”.

For the purposes of further analysis I decided to make a raft of unwarranted assumptions (naturally — I’m an education academic). The main assumptions were (and are) as follows.

(a) Whether or not a poster decided to use an indefinite article was deemed to be of no importance (so hits with or without an “an” were amalgamated).

(b) Negations before phrases (eg, *not* ashamed to be an Australian) might result in false hits, but if so, it was deemed to be of little importance as such instances would be few in number, and false hits on one side of the “equation” would be balanced to some extent by false hits on the other side of the equation.

(c) Multiple posts and hits from one person here or there would be insignificant and/or partly balanced on the other side of the equation.

I actually followed up on hits for a couple of hours and found that my assumptions were warranted (few false hits from negation, and few multiple hits). To provide some interesting comparisons, I carried out the same exercise using “American” in place of “Australian”. The exercise proved to be engaging and amusing, and I summarise some of the salient data below:

Initial findings: ashamed and proud Australians and Americans

For every Australian poster who was “ashamed to be... Australian” there were 2.9 who were proud.

For every American poster who was

“ashamed to be... American” there were 13.9 who were proud

Relative frequency of “ashamed” (per capita)

Oz: US = 1: 3.1

Relative frequency of “proud” (per capita)

Oz: US = 1: 6.5

Clearly, there were large differences between the US and Australia on the proud/ashamed dimension. I believe the differences are even more extreme between both US/Australia (combined) and some nomadic peoples living above the Arctic Circle. (As an education academic, I am inclined to believe that this difference is almost certainly cultural, but I must concede that it could be in part a function of differential access to the internet and computer hardware.)

I examined the content of some of the websites and blogs in which the phrase “ashamed to be (an) Australian” appeared, in order to get some qualitative insights into the reasoning behind such a statement. A representative sample follows.

A Litany of things we should be ashamed about

1. Mandy at Mindsay

Mandy adopts a complex, existential position on the Cronulla Riots. (As noted above, the “Cronulla Riots” were the original impetus for the plethora of public exhortations to be ashamed of being Australian.)

Mandy modestly posts a comment directed “at the whole world”, and states her position thus:

please, if you're reading the papers and watching the news overseas, this is not Australia, not Sydney and Sydney is not Australia.

She ends her heartfelt plea to the world with a bold statement (literally — it is in very large print, and bold type): “*We are ashamed*”. On reflection, I can only conclude that Mandy was actually one of the rioters — she says that she is ashamed, but she also says that the riot was not Australia, not Sydney and Sydney is not

Australia. The only conclusion that one can logically draw from these premises is that Mandy was actually one of the rioters.

2. Sarah at Green Left Weekly

Sarah reports on the results of an online petition calling for a “*royal commission into the Australian government's treatment of refugees*” (sic). She claims that the phrase “*I feel ashamed to be Australian*” was the most frequently appearing comment in the petition, which was “signed” by more than 7000 people. I think the general idea is that a “royal commission” would ameliorate the disturbing feelings of shame in the people calling for the commission. However Sarah and her fellow petitioners need to be careful here. The findings of the commission could be a wild-card. The findings could increase or decrease shame — and no one could be sure beforehand. If the Commission found that Australians should be ashamed, I imagine the people calling for a commission would feel vindicated, and therefore proud. But if on the other hand, the commission found that Australians should not be ashamed, then those who called for the Commission might be even more ashamed to be Australian.

3. Refugee Hosts at spare rooms for refugees

This site seems to be an offshoot of the one originally set up to allow promulgation of offers to give sanctuary to fleeing refugees within Australia. I must admit when I first heard of this social movement several years ago, and heard the accounts from the wannabe refugee-hiders about how they might go to gaol for hiding refugees, I thought of offering my home as a sanctuary. But not a sanctuary for refugees. Rather, a sanctuary dedicated to hiding the hiders of the refugees in the event that they themselves had to go on the lam. I thought such an offer would represent virtue piled upon virtue — and at no cost, since the refugee hiders would be as unlikely to require my services as refugees would be to require the services of refugee hiders.

One poster on the site expresses

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“disgust and dismay” at “*what we are doing to humanity*”. This might be regarded as an incremental step on the way to being personally ashamed, since the plural pronoun indicates that the writer includes him or herself among the reprehensible (even though he or she is personally against the practice which causes “disgust and dismay”).

Another poster says that he/she is “*ashamed of the government that represents australia (sic) as for the people who help put it in*”. This statement of shame provides for a useful differentiation between the virtuous Australians who voted the right way at the last election and those who voted the shameful way (ie, a different way from the poster). I think the implication here is that a democracy is only shameful if the government is elected by the majority of voters.

4. Backyard Missionary

The backyard missionary offers a stream-of-consciousness blog that doesn't seem to actually go anywhere. He/she popped up in my search because the movie *Bad Eggs* made him or her “ashamed to be Australian”. I haven't seen the film and I have no idea what it is about or who made it or why, but I certainly don't want to see it in case it also makes me ashamed to be an Australian. I don't think the backyard missionary should seek a career as a film critic anytime soon. I can just see his/her listings. No star ratings, but every Australian film in one of two categories: makes me ashamed to be Australian or makes me proud to be Australian.

5. Graham Cornes, Sports Writer

Graham wrote an article for the *Adelaide Advertiser* on January 6, entitled “Our night of shame demands AFL action”. I have no interest in sports, so I could not bring myself to read the whole article, but I did notice that contrary to the title of the article, Graham states in the third paragraph that “...we should never say that we are ashamed to be Australian”. Agreed, but then he goes on to qualify this assertion as follows: “...but many of us came close as we

watched the professional Australian footballers impose their superior size, strength and aggression on their Irish amateur opponents”. His account was apparently about the shameful of some kind of Australian footballing team trying to win a match against another nation's footballing team through the use of superior footballing skills. I am inclined to agree that this oafish behaviour (playing football) is reprehensible. But on the other hand, if you can't stand the heat Paddy, get out of the kitchen.

6. Antony Loewenstein

Antony thinks that the day of the execution in Singapore of an Australian drug trafficker is “*not a day to feel proud of being Australian*”. I don't think this statement was an intentional *non-sequitur*, so Antony must think the two events are related somehow. I would have thought that Singapore would make a more logical target for Antony's censure. But I suppose he couldn't have said that he was ashamed to be a Singaporean — since he isn't (a Singaporean that is).

7. Dave Clark at Geocities

Dave's post doesn't pussyfoot around. His header, in 36-point type is “*Failings and crimes of Australian Governments*”. The plural “governments” is quite deliberate, and it is refreshing to see a non-partisan treatment of “ashamed to be Australian”. Gough Whitlam and Bob Hawke cop some stick as well the usual target — John Howard.

Dave's article is a classic of the genre. He berates business and corporations for doing “corporationy things”. (He doesn't actually use the expression “corporationy things”, but I can't help using it as shorthand for the usual anti-business rant — see the Alec Baldwin “character”, in *Team America, World Police*.) Dave states that Australia is not a democracy (I think this simply means that the party he voted for didn't win). In the world according to Dave we have lurking and sinister secret police. John Howard and George Bush are said by Dave to be “*the greatest*

criminals in the history of humanity”.

I think with this last statement Dave has probably undermined his argument somewhat. Particularly among those of his readers who might have crossed paths with (say) Pol Pot or Idi Amin. Poor Dave admits that for most of his life he has been proud to be Australian, “...*(but when) the Howard Government rejected ratifying the Kyoto Protocol I felt, for the first time in my life, ashamed of my country*”.

Tiffany the index case

We'll leave these minor players behind us now to focus somewhat more closely on what I am inclined to regard as “the index case” of the “ashamed to be Australian” brigade. Tiffany represents in one rambling post the reasoning processes behind the position taken by “ashamed to be Australian” proponents. Tiffany posted at livejournal.com

Tiffany, like everyone else in the brigade is ashamed to be Australian, but she is particularly ashamed that her father grew up in Sutherland, and that her grandparents still live there. (Sutherland Shire is where the so-called Cronulla Riots took place, and the “riot” was the reason for her post.)

Tiffany doesn't explicitly condemn grandma and grandpa for not moving to a nicer suburb before daddy started growing up, but that is clearly the implication.

In Tiffany's confused mind, Grandma and grandpa are essentially short-sighted, complacent and inadvertent evildoers. They should have been more prescient back in the olden days. They should have realised that one day in the far-distant future some yobbos from Sutherland Shire would be involved in a beachside scuffle, and that as a consequence, Tiffany would come to experience a momentary sense of discomfiture. A sort of geographic-intergenerational proxy-shame.

If only they had had the sense to move to Woolarah or Mosman, the silly old codgers.

Later in her post Tiffany states:

I was planning on taking my grand-

parents out to lunch this weekend; thought we'd go to the RSL. No way that's going to happen now. Poppy practically lives at the RSL. I hope he's sensible enough to stay away from Cronulla for a while.

If I were Poppy, I would make a beeline for the Cronulla RSL. Tiffany has made it clear that she wouldn't be caught dead there. So it's the one place in the world that Poppy would be safe from Tiffany's relentless preening, posturing and patronising.

One of Tiffany's commenters makes the perfectly valid point that "you should be no more ashamed about being Australian than you would about being human". The commenter's intent was clearly to argue that Tiffany shouldn't be ashamed to be Australian because that's no more logical than being ashamed to be human. Unfortunately, I suspect that Tiffany is one of those rare individuals who is in fact ashamed of being human. Or more accurately, ashamed of having human parents and grandparents.

Tiffany's post, and the remarks of the commenter on her post, led me to carry out a supplementary web search. I decided to search on broader ashamed/proud categories. Here are the results.

Supplementary findings: ashamed and proud men, women, humans

623 posters were "ashamed to be a human being". This is a remarkable figure. Words fail me. And yet... there was an even more remarkable figure to consider. 1010 posters were "proud to be a human being". A ratio of ashamed to proud of 1: 1.6. Those self-esteem lessons back in the 80s and 90s must have had some success after all. But how on Earth is merely being a human being a personal achievement for which an individual can be proud? Read on for even more startling results.

For every woman "ashamed to be a woman", there were 1.4 men "ashamed to be a man".

For every man "proud to be a man", there were 14.8 women who were "proud to be a woman".

I'm not touching this one — but I'd just like to say for the record that some of my best friends are women, and as a man, I'm proud to know them.

At this stage I became excited at the prospect of gathering even more bizarre results. If a man could be ashamed of being a man (completely beyond volition) and a woman could be proud of being a woman (completely beyond volition), what else was lurking out there on the world wide web? Here are the results:

611 posters were "ashamed to be proud" (of some involuntary thing or other).

608 posters were "proud to be ashamed" (of some involuntary thing or other).

882 posters were "ashamed to be ashamed" (of some involuntary thing or other).

953 posters were "proud to be proud" (of some involuntary thing or other).

Teresa the babblatrice

I was particularly intrigued by the hits above on "proud to be ashamed", because this phrase seemed to me to sum up the hypocrisy underlying many public claims to be "ashamed to be...". No better case could be found to illustrate what is going on here than Teresa the babblatrice. (I like to attempt to resurrect archaic words which are euphonious and useful — babblatrice is one such.)

Teresa posted on a weblog called Teen Ink. It is a site set up to facilitate commentaries on travel and culture by "teens". Teresa was an inspiration to me, and her post was the factor which led me to finally commit to writing this article. It was she who quite unselfconsciously came up with the phrase "...so that everyone will know I'm proud to be ashamed (to be American)".

Teresa was probably moved to post on Teen Ink because it gave her an opportunity to showcase her literary skills. Only a literature major at a community college could come up with descriptive passages such as this:

We eat our grilled panini and squint into the raw light of noon, listening to the muted hum of gunning Vespas and adamant Italians, and watching the caravans of nuns glide by.

Without knowing anything about the young woman apart from her prose style, I would venture to hazard that she will soon complete her first novel — perhaps Ernest Hemmingway's *Death in the Afternoon*.

She gives the game away early in her piece when she quotes her father as saying "Don't talk so loud... they'll think we're American". A few paragraphs later, she sets out her thesis:

Dad looks put out. As the war spirals, the death toll rises and the Abu Graib pictures keep coming, my parents have grown furious and ashamed. In the past month, my dad has looked into claiming Greek citizenship, donated more money to Kerry's campaign than he can afford, and assured us that we're moving to Barcelona if Bush wins. I thought he was joking, but he is totally serious. When we packed for Italy, mom and I bought nice shoes and skirts so that we wouldn't look so American. Dad planned to do the talking, since he'd studied the phrase book and looks Italian.

It is therefore established early in the narrative that Teresa and her "Mom" and Dad have the decency to the ashamed, and the indecency, and moral cowardice to hide their nationality. Dad seems to be the hero of the story because later on, Teresa has her father saying "Be quieter, will you? They'll think you're American, for God's sake." After some more mind-numbing banality and unconscious irony, Teresa hits the jackpot:

Seemingly every building in Rome has a flag, protesting the invasion of Baghdad... I make a vow to buy a PACE flag. I will speak English as I buy it, speak it loudly and wear my Che Guevara shirt, so that everyone will know I'm proud to be ashamed... (that my) nationality oozes like an itched scab.

Thanks for the title for my article

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Teresa, although personally, I would be ashamed to be proud of wearing a T-shirt depicting the cliched likeness of a wannabe Latin-American Stalin. Ditch the cliché Teresa. Be a trend setter rather than a trend follower. Wear a Pol Pot T-shirt. Don't forget, in terms of geography, Che was also an American. Wouldn't it be better to wear a T-shirt depicting an Asian secular saint and saviour, rather than an American secular saint and saviour?

Making sense of nonsense

How to make sense of all this? In part, I suspect my instinctive and outright rejection of the ashamed brigade is an idiosyncratic one. I have always been supremely indifferent to many common forms of group solidarity. I don't claim this as a virtue, it is just a fact.

High school sports carnivals for example. I felt like a field anthropologist visiting a primitive society when I witnessed various forms of inexplicable behaviour (eg, running, jumping). In particular, the artificial "patriotism" generated by teachers and house leaders was a wonder to behold. I couldn't care less which house won the day, and I remained totally unmoved by exhortations to take pride in the achievements of "my" house. The upside of failing to feel pride if my house did well, is that I was also immune to shame if my house came stone motherless last (I don't know what mother has to do with it either, but we all know what the phrase means). I retained this supreme indifference to artificial group affiliation when I later became a high school teacher. Wise principals and deputies soon learned to leave me out of any role involving exhortations to house or school patriotism, as I was wholly unconvincing. If I was ever given the role of leading a mindless chant, I usually gave an excruciatingly unconvincing and often (I have to admit it) effete performance. An effete performance by a male teacher at a girls' school was innocuous. At boys' schools on the other hand, one had to negotiate a very tricky demeanour — nerdish perhaps, but essentially masculine.

I raise the issue of group affiliation here because the phenomenon can cause problems in certain contexts. I will stay on the theme of sports for the moment. Followers of cricket (the gentleman's game), seem to be able to express prideful affiliation at an appropriate level. When Australia plays Sri Lanka — in either Australia or Sri Lanka, supporters of either team seem to exercise enthusiasm without descending into violence. However some cricket contests between national teams can lead to problematic behaviour from supporters (eg, India and Pakistan playing each other in India or Pakistan). Other sports create higher emotional temperatures in fans, and heightened conflict between fans. They tell me that soccer in Latin America for example can lead to bloody encounters between supporters. On one occasion as I recall, a goalie from a Latin American team who scored an "own goal" (which sounds innocuous — indeed perhaps even positive to me) was actually murdered by an enraged fan. Football hooligans are common in Britain and often cause riots and affrays. In Australia, in my youth, the ethnic affiliations of Sydney soccer clubs often led to violence.

My natural indifference to group affiliation means that I have a natural resistance to the "ashamed disease". If an Australian or group of Australians somewhere at some time does something which is in fact shameful, I experience no feeling of vicarious shame. In any case, I am fairly confident that at the time some Australians are doing something shameful, other Australians are doing something for which they can feel proud.

Some concluding points

My purpose in writing this article is only in part to mock the pretensions of the "ashamed to be Australian" brigade. If mockery was my only purpose, then I would have good cause to be ashamed of this article — and some subscribers to *the Skeptic* would have good cause to be ashamed to be subscribers. (Or per-

haps not, given the general thesis of this article.) No, my underlying purpose is noble. I want to help those who are burdened with vicarious and unwarranted shame. I want to suggest the means by which they might emerge from this debilitating miasma of undeserved guilt.

The first thing that the reflexively ashamed should do is get a dictionary. Find out what ashamed actually means. For the reflexively ashamed who don't have, or don't want to buy a dictionary, I will provide a definition here:

Ashamed: "embarrassed or guilty because of something one has done or characteristic one has". (OED)

My advice is to read the definition and practice using the word in sentences where it properly belongs. For example: "*I am ashamed m, mthat I broke wind in the lift*". (Note to American readers: lift = elevator.)

However even this apparently straightforward locution can be subject to qualification, depending on the circumstances of the act, the characteristics of the individuals involved, and the relationships between the participants. Some individuals would be so concerned for the welfare of other lift passengers, that they would be ashamed of breaking wind even if they were to get away with it. Other individuals would not be ashamed unless the source of the act of breaking wind was obvious to the other passengers. There are even some individuals who to my certain knowledge would not only be proud of breaking wind in a lift, but would be eager to own up to it.

I can even make a small concession to the vicarious shame brigade. I can conceive of a circumstance where I could be momentarily ashamed, or at least embarrassed if somebody else broke wind in a lift. If (for example) I were squiring a group of visiting scholars around the university and a group of my students got into the lift, greeted me by name and then deliberately broke wind in concert, I would experience some emotion akin to shame — but on reflection, not shame. Perhaps

embarrassment. The embarrassment would come about because of my association with the students. But shame could only be appropriate if I was personally responsible for not stopping the outbreak of voluntary flatulence.

My second suggestion for the reflexively ashamed is that they should get in touch with their emotional lives, and get a vocabulary. These two go together. Allow me to illustrate with reference to the scenario as set out in the cartoon. The two foreground characters witness acts of violence. The reflexive response of the character on the left is to say "Look at all that violence... it makes me ashamed to be Australian". The cartoon character is experiencing

emotional disturbance, but the emotion isn't (or shouldn't be) shame. He could legitimately be disgusted, offended, outraged, repelled, revolted, sickened or angry at the behaviour of the perpetrators of the violence, but collective and unwarranted shame is (as the cartoon is intended to show) fraudulent and disingenuous.

My third point for the reflexively "ashamed to be Australian" brigade is that their posturing is completely counterproductive. Moaning, whinging and public posturing of this kind is far more likely to entrench opposition to their viewpoint than to persuade others to their view. There's nothing more provocative to an "average" Australian than to be told by some sanctimonious twit that they

should be personally ashamed of something they are not responsible for, and have no control over, or means of preventing. And that's assuming that they agree with the assessment of the act in question.

Having mixed in a great variety of settings with many people who are merely content (not proud) to be Australian, I know that telling them they should be ashamed is more likely to cause them to be reflexively proud than reflexively ashamed.

Just for the record, I'm proud that I'm not ashamed for anything that I shouldn't be ashamed for.



Some Skepticism About Rights and Their Effects

**Natural is not necessarily
better, even in the law**



James Allan is the Garrick Professor of Law at the University of Queensland. He has taught law in Hong Kong, Canada, the US, New Zealand. Most importantly, he was for ten years a member of the New Zealand Skeptics, serving on their governing committee for a couple of years before crossing the Tasman. He is delighted to have made contact with Australian Skeptics.

In this short paper I want to give you all a sense of the power of rights and of rights-talk. I also want to give you a potted history of the development of rights thinking, its philosophical bases, and how it came to occupy the overweening position it does today. Then I will discuss some problem areas where individual rights come into conflict with overall social welfare. I will be calling on you to bring your sceptical inclinations to bear in an area outside the usual ones of believers in little green men, loony mother earth types, those who don't understand that not all things natural are good things, and the plain-out scientifically illiterate. But let's start with the history of rights.

A Brief History of Rights

The idea of rights can be traced back to the classical Greek thinkers, not least to Aristotle. Rights have their home in natural law thinking — the notion that there are moral entities that have an existence which is independent of human action or belief or slowly evolved sentiments, and that are as much a part of the structure of the universe as the entities whose existence is presupposed and investigated by the physical sciences. (Putting it that way, I am assuming I have made at least a few Skeptics a bit uncomfortable.)

Of course this sort of natural law thinking was picked up by the great Catholic thinkers. Aquinas is the best known. And once you bring into the equation an omnipotent, perfectly benevolent theistic God, it's not hard to see how you explain and justify these preexisting and historically non-contingent entities called natural rights (or, in today's terminology, human rights). Each individual being, as God's creation, gets his or her rights, even to the point where man-made laws may have to give way to this higher natural law with its natural rights. But be warned.

Lest anyone reading this get the impression that natural law and natural rights were, in the Catholic tradition, concepts which spurred revolutionary or progressive policies and democratic thinking, bear this in mind. The concept can be revolutionary — think of France in 1789. On the other hand, it can be stiflingly conservative — after all, the Catholic Church did not condemn slavery until 150 years ago. How can it be both? Well, the logic of natural law and natural rights can work in either of two ways.

A) It can say "this man-made law is evil, therefore (because of natural law thinking) it doesn't count as law at all". That is how it works when it is revolutionary.

Or

B) It can say “this is law, therefore (using the same natural law logic) it must be good”. This is how it works when it’s being oppressively conservative and against reform.

Now let’s jump forward to the 17th and 18th Centuries. Men like Locke and Rousseau started talking about the inalienable rights of man. It was Locke, after all, that men like Jefferson and Madison had read before drafting the Declaration of Independence and the US Constitution. The language of rights is clearly attractive. It appeals to one’s sense of personal entitlement. It fits in with the then growing notions of liberal individualism. Rights are there to protect the individual against the state — this was the idea in the late 18th Century; rights are entitlements belonging to all individuals simply by virtue of being humans. (At this point you are supposed to ignore the fact that slavery, as an institution, was still thriving even in places where men were declaring individuals’ inalienable rights.)

Interestingly enough, it was soon after the American and French revolutions that rights-based thinking and rights-talk went into something of a decline. That may explain why bills of rights are recent innovations everywhere in the world except France and the US.

What led to the decline, the temporary decline, of rights-based thinking and talking were two factors. Firstly, David Hume showed that you cannot derive an ‘ought’ from an ‘is’. This simple, logical point undermined natural law thinking at its core (because natural law starts from a set of claims about what is the proper end of being human and of human nature, and moves from there to make claims, moral claims, about what humans should do or should be free to do).

As an aside, notice that most of the greeny, alternative medicine-type claims fall foul of Hume’s Law; they move from saying the way

things are indicates the way things should be. In other words, they assume the way things are is necessarily good — and that is patently false. Hemlock is natural, and bad. Dying in child birth is natural, and bad. Toothaches are natural, and bad. Hume’s point boils down to recognising that some natural phenomena are good and others bad and determining which is which requires something more — some evaluative judgment — than noting the naturalness of what is being assessed or evaluated.

The second factor behind the decline of rights-based thinking from about the early 1800s was the rise of consequentialist, or utilitarian, thinking beginning with Jeremy Bentham. On the Bentham utilitarian model, the right action is the one that tends to increase overall social welfare or happiness. This sort of utilitarian outlook dominated moral thinking in the West for the next century and a half until the end of the Second World War. It gave rise to economics, and in that form is still powerful. (Utilitarianism aims to maximise human happiness or welfare, which is hard to measure, while economics aims to maximise money or wealth, which is much easier to measure. Of course the two are not equivalent. More wealth does not automatically translate into more happiness in any 1:1 way.)

It was after World War II, after all the many horrors perpetrated in that conflict — in other words only in the last 50 or 60 years — that natural law thinking was reborn. It was only then, in the lifetimes of many still alive, that rights and rights-talk became the dominant moral currency in all liberal states.

Of course we don’t these days talk in terms of natural law, and good liberals certainly don’t tie anything to a theistic God. No, today we talk in terms of human rights, fundamental human rights. But the natural law thinking is there just below the surface all the same because these proclaimed human rights are said to exist whether recognised or not in a particular jurisdiction’s legal system.

We all are entitled to free speech, to the free practice of religion, what have you. We are all said to have these timeless, transcendent rights due us simply by virtue of being humans.

The antennae of skeptics will at the very least be twitching at this point. Legal rights are easy to understand and seem pretty clearly to carry good consequences with them most of the time, in terms of happier citizens. But how do we understand rights when they are not part of a particular legal system? Notice that in this modern form the explicit link to God has been severed but the mystery remains. Do rights exist ‘out there’ somewhere? Do they exist independently of the beliefs and views of people, cultures or nations? Are they somehow, in some unexplained way, part of the structure of the universe? So ends the potted history. Two points need to be emphasized and then we can move on to some problem areas with rights and rights-based thinking.

Clarification Number One:

I’ve cheated a bit. I’ve implied that rights rest solely on a natural law, almost mystical foundation. In fact, the Benthamite utilitarian can give a perfectly good defence of rights. It would go something like this — “*Certain interests and values should receive extra protection in the form of rules and rights when doing so tends, on average, over time, to increase social welfare.*” On that utilitarian basis it’s quite easy to defend the liberal state or the right to free speech or freedom of religion. Nothing mystical is needed at all. Protecting these things through rules and rights increases social happiness, that’s why we protect them (not because such rights have some transcendent connection with God or unseen moral forces). Otherwise, if they didn’t increase the level of welfare or happiness, it would be silly to protect them.

And let me be clear that there are some utilitarian liberals out there, people like Richard Posner. However, my introductory characterisation is

nevertheless mostly accurate. Most of today's rights defenders and rights advocates — explicitly or implicitly — are natural law adherents. They support rights in natural law terms and with all the hints of absolutism that implies.

Clarification Number Two:

Don't forget just how recent this renaissance of rights-based thinking is. Today, it dominates all moral thinking, certainly in the West. Rights-talk has pushed out and swamped almost all other sorts of moral analyses. But this recolonisation goes back fewer than 60 years. The UN's Declaration of Human Rights was made in 1948; the International Covenant on Civil and Political Rights in the 1960s. The mad rush of countries to get their own bill of rights is even more recent. Canada's came in 1982, New Zealand's in 1990 and the UK's in 1998 (though it didn't come into force for a couple of years after that). Amongst Western nations today, only Australia has no form of bill of rights — the dinky one in the ACT doesn't count! And I think we're the better for it, though I say that as a utilitarian liberal.

Problem Areas

Let's recap. Most moral and political debate is these days conducted in the language of rights. This doctrine of human rights has largely replaced the doctrine of utilitarianism which focuses on consequences and aims to maximise social welfare. This language of rights, with its connotations of entitlements and at times its stark absolutism, is to most people in the modern Western world immensely emotionally attractive — it can take away one's skeptical antennae.

Rights-talk seems often to carry with it a capacity to overwhelm all disagreement not itself framed in terms of rights. So only another rights-based claim or argument appears to many to be good enough to trump the original rights-based claim or argument.

My position is that this pre-emi-

nence of rights is far from obviously a wholly good thing. No one has yet to give a persuasive, non-utilitarian explanation of what these things we call 'rights' are or where they come from or how they can be satisfactorily justified. Their colonizing power is too great. And as there is no easy way to ground them, most people just pass over the foundational questions about rights in silence. It's a bit like assuming that everyone in the room is a morally sound *Guardian* reader and won't raise any awkward difficulties.

Meantime the questions keep coming. How are we to rank rights against each other? For example, how does the right to free speech weigh against the right not to be discriminated against and how, in turn, do they weigh against the right to freedom of religion? And which human interests are important enough to warrant the protection of rights? We can't take just any interests anyone happens to have. And it can't even be all interests most people find important, very important even, as few of us would want to say there's a right to sex, say. And we can ask if rights cover only individuals, as was originally thought, or groups as well. Likewise, is one right somehow preeminent? (For instance, is it the right to dignity or perhaps the right to equal concern and respect or to property or to justice or to participate in political decision-making or to something else?)

More practical concerns about rights — and their capacity to overwhelm all non-rights-based thinking and arguments — also exist. The emphasis on rights can lead to an excessive politicisation of the judiciary. It can promote an over-the-top entitlement culture. It can encourage excessive litigation. All of these are potential problems in my view. I much prefer the hard-nosed Benthamite, or Richard Posner-like, consequentialist view of rights. That said, let me turn now to examples of where individual rights (which necessarily are expressed in vague, amorphous terms) come into conflict with overall social welfare calculations.

An Example – the Right to Free Speech

For skeptics, free speech is clearly a big concern. And justifiably so. Yet once the value is expressed in the language of rights, difficulties can and do emerge. Take some real life cases. Here's one from the Canadian Supreme Court called *RJR MacDonald v Canada*. It shows the dangers of what I've been describing.

In *RJR MacDonald* the Supreme Court of Canada struck down legislation aimed at limiting commercial advertising, including billboards near schools plugging tobacco products. The court in effect held that this sort of advertising trumped health and safety concerns.

Express values in the vague, amorphous, near absolutist language of rights — who is not in favour of freedom of expression? — and you get universal or near universal agreement. Move from the plane of vague generalities to the real-life concerns of where to draw lines, however, and you get widespread disagreement. Readers of this journal would differ on where to draw the line when it comes to pornography, to hate speech laws, to rules prohibiting defamation, to the rules surrounding the funding of election campaigns, and more. That disagreement is between reasonable, intelligent, even nice people. And yet many people are happy, under a bill of rights, to hand the deciding of such issues over to committees of ex-lawyers.

You see, drawing real life lines is contentious. Mouthing fine-sounding moral abstractions is almost never contentious. The issue is, who do you want deciding the contentious issues, elected politicians (with all their admitted faults but also all their accountability) or unelected judges (with next to no accountability, other than to their own consciences)?

What about in Australia? Well, in the *Australian Capital Television* case the Australian High Court "discovered" (and I put that in quotation marks deliberately because in my view it had little to do with discovery

and much to do with making it up) that there was an “implied right” in our Australian Constitution, and this despite the fact that the founding fathers explicitly forswore any sort of real, actual bill of rights. Oh, and the actual effect of the decision was that legislative limits on spending money to buy television time (in favour of that time being allocated based on how the parties did last time and were polling) was struck down. Good for free speech in the abstract; good for Rupert Murdoch and Kerry Packer in practice. And notice again that there’s nothing self-evidently right, or wrong, about how to decide such cases.

I could go on and on and on listing bill of rights cases from Canada, the US, New Zealand and now the UK, cases that the judges have decided where the decisions are highly contentious. You might agree with some, and disagree with others. It’s the same as statutes. Some you will think are good, but not others. The difference is that you have a say over legislators. It’s a small say, but it’s a say. You have no say over judges. Worse, when judges decide cases, and they disagree, do you know how they resolve their disputes? They

vote. Four votes beat three, full stop. The most morally moving decision does not prevail. The key difference between that and elections is the size of the franchise.

My point is that when rights have to be applied — when they come into conflict with each other or with social welfare policies and calculations — nothing about rights themselves does much to help us (or judges) make those decisions and draw the difficult lines. One can chant the mantra of “right to freedom of religion” until one’s blue in the face. By itself it won’t help with deciding whether young Muslim girls can wear headscarves to public schools, whether tax money should go to denominational schools, whether phrases with the word “God” in them are acceptable on a country’s currency, or whether drug-taking is somehow less illicit if done as part of a particular rite or ritual.

‘The right to free speech’ or ‘the right to justice’ or ‘the right to be secure against unreasonable search and seizure’ sound great; they resonate with most listeners; they are emotionally attractive. But descend just a bit from the plane of vague generalities, as skeptics are wont to

do, and you notice immediately that all that comfortable consensus disappears. We now find dissensus; we find disagreement between reasonable people on moral issues. This is just a fact of living in groups.

There are no grounds I know of for thinking that a few years of law school and a decade or more of legal practice in a big law firm gives one greater moral perspicacity than plumbers, teachers, secretaries or ordinary voters. And one of the ironies of the whole bill of rights phenomenon is that lawyers are generally despised or ridiculed and yet, the moment they get appointed to the bench, they are then generally held up as approaching all-knowing paragons.

Skeptics are used to being skeptical of medical claims, where the evidence is exiguous. They’re used to being skeptical of all sorts of emotive, fine-sounding claims. Funnily enough, I’m betting a bunch of you reading this piece find it a lot harder to be skeptical about bills of rights. Give it a try. The evidence is on the side of the skeptics here too.



National Convention

Science, Truth and the Media

The Age Theatre, Melbourne Museum

November 18-19

Watch our web site www.skeptics.com.au for details and updates as they firm up.

A Message in a Bottle

Spoiling a good story with facts

It was towards the end of January when I first became aware of a story, published in the *West Australian*, about a 10 year old Perth boy who claimed to have found a message in a bottle that had drifted from England and washed up on a Perth beach. More specifically, it was found at Hillarys Boat Harbour which just happens to be round the corner from where I live. Here was a local story of interest although I doubted any claim that the bottle had actually drifted from Lancashire, England to Perth, Western Australia in the reported time of 6 months.

Further doubts about the authenticity of the story were raised when Barry Williams sent me an email:

Just had a call from Dick Smith about the "letter in a bottle" found in Perth boat yard that was thrown into the ocean in England only a few months ago. Dick is certain (and I agree) that it is highly unlikely that a bottle could make that journey using only ocean currents in the time alleged. Can you find out any more details from your local sources? Newspapers here have only sketchy info, but are playing it up.

Compared to reporting in the west, newspapers in the east certainly were "playing it up" and my attempts to get more details from local sources quickly drew a blank. I was told that the *West Australian* account had been sourced from overseas in the form of a phone call from

a Lancashire newspaper. I had to go on-line to track down the many overseas newspapers that had carried the story.

All the reports alleged that in July, 2005, 4 year-old Alesha Johnson sketched a picture of herself on a piece of paper and added the message: "Hello, if you get this message please write back." The class had been discussing the topic "At the seaside" and this led to the idea of sending a message in a bottle. Alesha wrote down the address of her kindergarten in Heysham, placed the message in a plastic Coke bottle and, supervised by her Mum, Sonia, threw it into Morcombe Bay on the North West coast of England.

Almost 6 months later, a letter arrived at the Heysham Kindergarten. It had been written by a 10 year-old boy called Bob who claimed he had found the bottle at Hillarys Boat Harbour, just north of Perth. Doreen Johnson, Manager of the Kindergarten confirmed that Alesha had thrown the bottle into the water in July and that Bob had replied from Perth approximately 6 months later. She said that the people of Heysham were desperate to know more about Bob.

Apparently, Bob's surname could not be deciphered from his handwriting (they thought it started with the letter "F") and he did not include his address. Bob said they were moving house but he didn't say where they were going. He promised to write



John Happs, an education consultant, heads the *Western Australian Skeptics*.

once they had settled in their new home. He also said that his Dad has shown him where Heysham was on a map and pointed out that the bottle had travelled about 14,500 kilometres in the 6 months since it had been thrown into the Irish Sea.

The Times of London reported:

Nobody knows exactly how the message got to Perth. The most likely route would have been into the Atlantic, past the west coast of Africa, and into the Southern Hemisphere. This marathon voyage would also have crossed the Indian Ocean.

news.bbc.co.uk/cbbcnews/hi/newsid_4630000/newsid_4630800/4630888.stm

History

For centuries, people have thrown bottles and other containers into the sea with messages they hoped would be picked up by others. Bottles have been launched for scientific purposes, with the Greek philosopher Theophrastus starting the ball (or bottle) rolling by throwing sealed containers into the Mediterranean to demonstrate that water flowed into the Mediterranean Sea from the Atlantic Ocean. He did this in 310 BCE and although there is no record of any reply as yet, somebody in Western Australia might find it one day.

More recently, the Drift Bottle Project, started in 2000, has launched many bottles from different ships in Arctic waters, along the west coast of North America and from the Panama Canal to the Bahamas. Dates and exact position are recorded inside the bottles. This is an inexpensive way to gather information about ocean currents although only one bottle in twenty-five is returned while the others sink or become buried by sand on some remote beach.

Some of these bottles have drifted from the Arctic to the Caribbean with an average drift rate of 5-10 kilometres per day. Information from drifting bottles is important since it continues to add to the body of knowledge about ocean currents.

Messages have been sealed in bottles and launched by spies wanting to report enemy positions, troop numbers and fleet strength. This concerned Queen Elizabeth I, who made it a capital crime for anyone but the official Uncorker of Ocean Bottles to open bottles located at sea or on shore.

For centuries, messages have been placed in bottles and thrown from ships to record their progress and position. A typical message dated 16th February, 1861 was recently retrieved on Grand Turk Island. It read:

H.M. Sloop Ringdove 25th November 1859 Lat 26.21 Long 18.7 by observation. This paper was thrown overboard at noon on the above day having just entered the North East trades. Force wind 3, along North westerly swell. Barometer 30.43, Thermometer 75, seawater 73. R. G. Craigie Commander.

Christopher Columbus recorded in his log that his ship *Nina* was struggling in a wild storm in the middle of the Atlantic. Afraid that he might not survive, Columbus composed a report of his situation, placed it inside a sealed cask and threw it overboard. His message asked the finder to notify the Spanish Queen. It was found more than 300 years later but not in Western Australia.

The windward beaches of the Turks and Caicos Islands are constantly receiving debris from the sea, including natural materials such as vegetation (tree branches and coconuts) along with messages inside bottles. Nils and Grethe Seim live on Grand Turk and have established a collection of the many bottle-borne messages which have arrived on the islands, having travelled from places such as New York (6 years travel time), The Canary islands (14 months), Bermuda (2 months), Lisbon (16 months) and Miami (2 weeks). The (optimistic) assumption here is that the bottles were recovered shortly after they became beached.

www.timespub.tc/Astrolabe/Archive/Fall2001/message.htm

In distress

Bottles, containing messages of distress, have been dropped into the ocean on numerous occasions over the years. In 1714 Chunosuke Matsuyama and his crew of 44 men were shipwrecked on a small island in the South Pacific Ocean. A message was scratched on a piece of wood, sealed inside a bottle and set adrift to be found 150 years later on a Japanese beach — much too late to save Matsuyama and his men.

In 1915, a passenger on board the torpedoed passenger liner *Lusitania* is reported to have placed the following message inside a bottle:

Still on deck with a few people. The last boats have left. We are sinking fast. Some men near me are praying with a priest. The end is near ...

It should be said that there are varying accounts of this story in terms of what the message said, where the bottle was picked up and who actually found the bottle.

When over 800 Jewish refugees fled Nazi Germany in 1939, they fully expected to be granted asylum in Cuba. Unfortunately, the Cuban President, Frederico Laredo Bru refused them entry and their ship, the SS *St Louis* remained in Havana Harbour for 10 days.

It was reported that hundreds of messages were placed in bottles and thrown over the side of the SS *St Louis* while it remained in the Cuban port, with the typical plea enclosed:

Please help me President Bru or we will be lost.

Apparently, many of these messages washed up along the east coast of the USA; a number were found in Europe with the last reported find in the 1960s. None were located on West Australian beaches.

Scientific use

Bottles have long been used by scientists to acquire information about weather patterns and ocean currents. Understanding drift patterns enables authorities to predict the paths of oil spills while search and

Message in a Bottle

rescue teams can use drift information to more efficiently search for missing boats, fishers and swimmers.

Many unusual "floaties" have been monitored over the years and some of these have revealed valuable information about ocean currents. They can move in complex patterns under the influence of wind, ocean temperature, salinity, ocean floor topography, land mass and the Earth's rotation. Some currents are transient, covering a relatively small area of ocean while others are more permanent, extending over much larger areas.

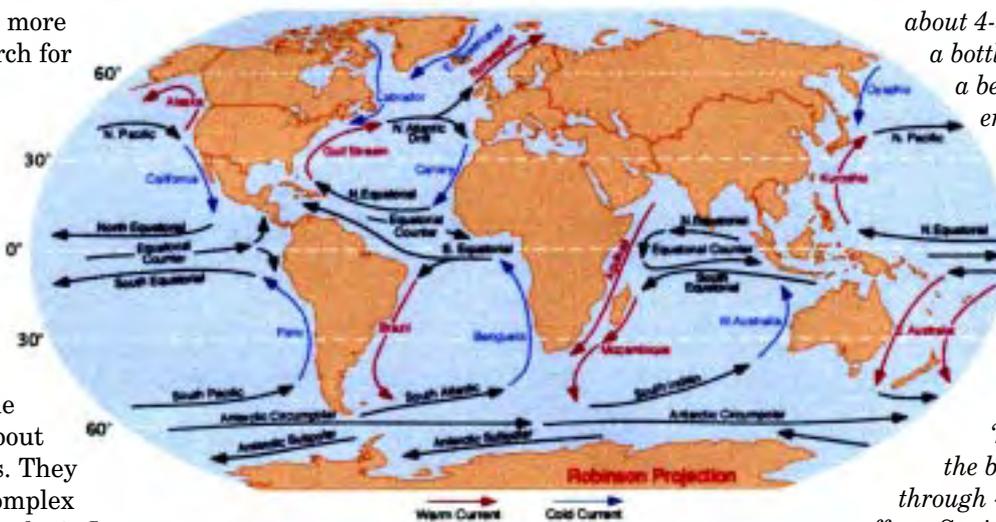
Warm surface currents, such as the Gulf Stream, are mainly driven by winds and the Earth's rotation. They flow relatively quickly (40 to 100 kilometres per day) from the tropics to temperate latitudes. Conversely, cold surface currents flow from temperate and polar latitudes towards the equator.

Continental land masses, bordering oceanic basins in the Northern Hemisphere, cause the larger ocean currents to move in clockwise circular patterns called gyres. Gyre systems flow anticlockwise in the Southern Hemisphere but are generally not as pronounced as the northern forms.

The Perth bottle

Now it is tempting to take an optimistic and simplistic look at the range of different ocean "conveyor belts" which might connect and influence the movement of a bottle thrown into the Irish Sea. For instance, we could see it being taken up by the clockwise flowing Atlantic gyre and moved down the west coast of Europe and Africa.

A further stretch of the imagination could then see our Perth-bound



Major World Ocean Currents
www.physicalgeography.net/fundamentals/8q_1.html

bottle hooking up with the southerly Brazilian Current which would conveniently push it on to the westerly Antarctic Circumpolar Current. The final leg of this journey would occur if the bottle then hitched a ride with the westerly South Indian Current which would then push it towards the West Australian coastline.

But could this incredible journey actually take place, at least theoretically? To get a better idea, I emailed a number of people with a professional knowledge of ocean circulation and the movement of drifting objects.

My first contact was Dr Sean Chamberlin, Professor of Earth Sciences and oceanographer at Fullerton College. His initial comment was:

Although I am not familiar with that story in particular, it is indeed possible.

He (skeptically) qualified this comment:

Now that doesn't mean a 6-month trip from Morcombe Bay to Western Australia really happened.

My next contact was Professor Charitha Pattiaratchi from the Centre for Water Research at the University of Western Australia. He responded with:

A similar event was reported about 4-5 years ago when a bottle was thrown off a beach in Essex ended up in Geraldton.

Well I'll come back to that in a moment.

He continued:

It is theoretically possible. There are a few 'hurdles' which the bottle has to go

through - get to the ocean off say Spain, then somehow cross the equator in the Atlantic. After that the prevailing winds would bring it to WA. The time frame is OK. Assuming that the bottle was a plastic one and therefore would spend most of its time in the air.

Once again, there followed a skeptical word of caution:

... but twice in 4-5 years would be too much of a coincidence.

Professor Alexander Gavrilov, from Curtin University of Technology, didn't even consider the England-Perth bottle journey a possibility:

Was it a joke? Even if we don't have any continents and the water current is directed exactly from England to Hillarys (the path length would be about 15,000 km), it would require the bottle to travel with the speed of about 1 m/s, which is 10 times faster than typical surface currents. The only way for this bottle to get to Western Australia from UK is to follow the global ocean circulation (conveyor belt), which would take decades and, moreover, would require the bottle to be capable of diving to 1000's of metres on the way from the Northern Seas to the Pacific Ocean.

But what was the response from oceanographers closer to the starting point? Penny Holliday from the National Institute of Oceanography in Southampton said she had never

heard of a bottle travelling so far so quickly.

Peter Challinor, also from the National Institute of Oceanography in Southampton, was more emphatic:

I think it is extremely unlikely. It could not have travelled unaided.

He expanded on this:
the world's currents would have prevented the bottle getting to Australia — it probably got a lift in a ship.

(A Boeing 747 was not considered at this stage.)

Several oceanographers, from the USA, suggested that Dr Curtis Ebbesmeyer would be the best person to consult on this issue. He is a Seattle oceanographer and recognised expert on marine debris and ocean drift.

Curtis readily acknowledged the complexity of ocean currents and the difficulty in predicting drift patterns:

If two bathtub toys are dumped, say, from a freighter in the middle of the Pacific at the same moment in the same spot, one may wash up in Hawaii while the other may end up frozen in an Arctic ice floe.

Interestingly, he appeared comfortable with the idea of a bottle actually making the journey from England to Western Australia:

Messages in bottles have been known to drift from England to Perth.

He clearly wasn't happy with the reported time-frame:

The maximum speed I know of between England and Perth is about 25 nautical miles per day over a

distance of some 16,000 miles. So the fastest time is a couple of years. Six months makes me want to re-check the times of launch and recovery.

He indicated that the story warranted further investigation:

This is a potentially valuable find as the number of bottles which have been reported along this route is only a handful.

But let's forget the time-frame arguments and get back to the oft-quoted belief that bottles have actually drifted from England to Perth. Remember that even Dr Ebbesmeyer subscribed to such a belief:

Messages in bottles have been known to drift from England to Perth.

But is there any hard evidence that any bottles really made such a journey?

Another bottler of a story

In 1999, the other well publicised WA bottle find in Geraldton, WA, involved Charles Harford-Cross, who claimed to have found an SOS message placed in a bottle by two boys from Essex.

Media Watch (February 13, 2006) followed this particular story and found that Harford-Cross had actually picked up the bottle while visiting England. He thought it would be a good prank to bring it back to WA and claim he found it in Geraldton. Received more publicity than he bargained for, well and truly painted himself into a corner and stood by his claim for several years. Harford-Cross only recently confessed to the hoax.

Meanwhile — back at Hillarys Boat Harbour, we have to ask the questions:

Will young Bob make himself known at a later date?

Will Bob's Dad support the bottle story?

Will there ever be real proof of a bottle having drifted, unaided from England to WA?

Call me skeptical but I have a tendency to answer NO to all of the above. If I'm wrong, you'll certainly be hearing from me again and it should be a story worth bottling.

Further Reading

www.smithsonianmag.si.edu/smithsonian/issues01/jul01/beachcombing.html

www.sci.pac.dfo-mpo.gc.ca/osap/projects/driftbottle/default_e.htm

www.guinntiques.com/bottledrop/

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www.allheadlinenews.com/articles/7002016484

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www.skeptics.com.au**

Hyphen-panic (sic)

Courage is the Word*

An over-due fight-back from a cool-headed word-smith

WHY *fast-track, scan-read, time-frame, self-promotion, process-writing, Comb-Over, chuck-writing or print-outs?*

The italicised hyphenated words above (and below) are all examples of another punch in the face for punctuation at the hands of a phenomenon that could be called *hyphen-panic* (sic; sick, even). Ironically, the examples of *hyphen-panic* above were used without jest in Jef Clark's otherwise-noble piece, "English expression; is their cause for concern?" (*the Skeptic*, 25:3), lamenting the hazy use of language. I am only quibbling with Jef's own hazy overuse of hyphens because he may be one of the few people to take my point seriously — rather than as anal-retentive ramblings.

Jef could claim that he shares esteemed company in his usage of hyphens. Yes, I have noticed *ill-effects* in the usually-precise prose of *The Spectator*, and *breast-feeding* in that other stickler for style, *Time* magazine.

Hyphen-panic seems to come in occasional and irrational jolts that are gripping a raft of thoughtful and articulate modern authors of excellent books, such as Michio Kaku who hyphenates *light-years* in his *Parallel Worlds*, and Luke Slattery in *Dating Aphrodite* (hyphenating *sea-*

crossings, stomach-churners, no-one and "Dionysus the god of *letting-go*"). Peter Watson's *Ideas: a history from fire to Freud* hyphenates *hand-axes, word-plays, sea-change, well-being*.

I was perversely pleased to find *free-will* used throughout John Carroll's book, *The Wreck of Western Culture: Humanism revisited*, only because it tied in with that book's woolly line of argument. A.C. Grayling, in his great new biography on Descartes, briefly restored my faith. Here was "free will" without a hyphen. But, alas, also here was *still-births, counter-attack, pen-portrait* and *no-one*.

Iain McCalman does not hyphenate "no one" in *The Last Alchemist: Count Cagliostro: Master of Magic in the Age of Reason*, but lapsed with *good-bye, wonder-worker, show-off, wife-beater* and *next-door*. In another great book, *The Tyrannicide Brief*, Geoffrey Robertson was also blighted by *hyphen-panic* with *court-martial, king-killing, cross-examine, letter-bomb* — but "no one" was used without a hyphen. (*Time* magazine, thankfully, is holding the no-hyphen line on "no one". Why should it be hyphenated? No one knows.)

So what is *hyphen-panic* and its symptoms? It occurs when we are faced with using two associated words such as "free will" or "baby boomers". There seems to be haziness as to how to treat them. Are they:



Mike Robinson is a semi-retired journalist working on his fourth novel. The first three never got past Chapter One.

* Without a Hyphen

- two separate words,
- two hyphenated words, or
- one joined complex word?

Take, “bully boy”, for instance. It could easily be joined as “bullyboy” without causing mayhem. So why hyphenate *bully-boy*? (*The Weekend Australian Magazine*, Nov 19-20, 2005, p31). No reason, except that even the best reporters and sub editors are getting caught in the panic and confusion.

Just two other instances of the confusion. A headline says “Resources groups rock solid” — but in the body of the story we are told “big resources players are now about as *rock-solid* as any investment”. (*The Weekend Australian*, Nov 19-20, 2005, p41). Also, Kerry Packer faced death *head-on*, according to an Adelaide *Advertiser* headline (Dec. 29, 2005), but the report tells us that his “wish was to face death” — without a hyphen — “head on”.

This is hyphen haziness that can lead to laziness, if not craziness. I have always found *The Macquarie Dictionary* to be a source of this haziness. My pickpocket (as distinct from *pick-pocket*) edition of the *Macquarie* has, for instance, *water-column* and *water-bottle* hyphenated but not “water cycle” and “water dragon”. Then the *Mac* has *sea-urchin* but “sea wasp” sans hyphen, along with a host of other bewildering hyphenations such as *fence-sitter*, *pen-name* and *lime-juicer*. This extends into the latest *Macquarie Australian Slang Dictionary*. Why are *dung-puncher* and *leg-opener* hyphenated but not “Toorak truck”?

So what is wrong or right in how we use hyphens? Somewhere there are arcane rules, such as the one about not hyphenating an adverb, which are receding beyond the memory of the best writers. That’s why even they get *hyphen-panic*.

Life would return to an uncluttered elegance — the haze would clear — if we had just one primary use for the hyphens: as the means to link words that are adjectival descriptors of another key word. This is where the hyphen shines.

The hyphen’s importance in making sense of what we write can be seen in the example of a “man eating tiger” as against the intended “man-eating tiger”. Or, more delicately, “a man-eating woman” as against a “man eating woman”.

A “once in a lifetime opportunity” should have the words “once-in-a-lifetime” hyphenated to qualify “opportunity”.

Hyphens, as these examples show, not only improve the sense of our writing. They are crucial in punctuation’s other role: to orchestrate the rhythm of language as we read it. Punctuation is the literary equivalent of musical notations. That is why the hyphens in “once-in-a-lifetime” are a signal to mentally absorb it at a faster pace (the pace at which we would speak it) than “once in a lifetime” without hyphens.

To hyphenate *free-will* demeans the full weight that should be given intellectually and rhythmically to two special words: free will.

Not using hyphens demands courage (derring do, not *derring-do* — bravely defying the *Oxford Dictionary’s* insistence on a hyphen).

This need for courage relates to the vexed question of when and whether two associated words, such as “high” and “way” suddenly become one word: “highway” — without going through that wimpy half-way period of being *high-way*.

That moment when two words suddenly become joined as one compound noun is cloaked in mystery. Maybe it happens on winter solstice nights when all those buried cow horns filled with dung start weaving their magic. The Germans have many compound words in their *Worterverzeichnis* or vocabulary. Rudolf Steiner spoke German. Join the dots.

But there are many English words that could be compounded if we had the courage to give them a go. Associated words could be made into compound nouns, such as “takeoff”, “leadup”, “washout”, “breakin”, instead of copping out with the hyphenated *take-off*, *lead-up*, *wash-out* and *break-in*.

Nor is there any need for a hyphen after “self”, as in “self defence, self determination and self control”, when “self” is being used as just an adjective. And let’s rise up and reject style books or dictionaries that say references to a commander in chief or a bride to be or an attorney general or lieutenant colonel need to be hyphenated.

We could even learn to live with the dreaded joining of vowels in “coordinate” and “cooperate” if we gave them a go. OK, maybe “reenter” and “reelected” should not be attempted in front of children, but it is better to avoid them rather than resorting to *re-elected* and *re-enter*.

The choice is clear: either associated words, such as “breast feeding” (when they do not adjectivally qualify another word) are two separate words or they should be joined in holy matrimony as one compound word, “breastfeeding”. But they should never be split asunder by a rogue hyphen.

Conversely, as a side symptom of *hyphen-panic*, compound words such as “anymore” and “everyday” are starting to crop up in a context where they should remain two words. We are losing the distinction between everyday happenings every day.

The prime example of this side symptom is the case of “underway” — as in: “The project is about to get underway”. Surely, in this case, it should be, and always be, “under way” as two words — while an “underway” describes the opposite of an overpass. But, no, this profligate misuse of “underway” is out there breeding like rabbits. It even bobbed up in Slattery’s erudite *Dating Aphrodite*. How did all these underways get under way? What set them off? This remains one helluva (not *hell-uv-a*) mystery.

Perhaps a few cow horns with bung dung were buried that winter — by someone. Ah! “Someone” — the wedding of “some” and “one” with a sharing of vowels and a happy loss of hyphen.



Money Down the Toilet

A critical look at the need (or not) for nutritional supplements



Stuart Adams is a qualified nutritionist (with a real degree from from a real university) who writes articles and regularly lectures for Nutrition Australia.

The terms ‘down the toilet’ or ‘down the drain/gurgler’ are frequently used as hyperbolic metaphors to describe waste; especially when that being wasted is money. Literally speaking however, most things that are wasted, including money, do not actually end up in a toilet — this is just a saying. The enormous amount of money that Australians spend each year on vitamin and mineral supplements, however, is an exception. The excessive amounts that are ingested in the pills, powders or potions, that people pay big bucks for, are generally passed through the body and are excreted as waste; quite literally into the toilet. This article takes a critical look at the need for vitamins, and explains why popping vitamin pills is not simply a poor substitute for a healthy diet, it is a waste of money and may be potentially dangerous.

Supplement use

In 1986, the Parliament of Victoria Social Development Committee published a study which revealed that the health-food industry had grown rapidly between 1970 and 1986, resulting in a five fold increase in health-food outlets.¹ To date, the largest study to examine the prevalence and cost of alternative medicine in Australia was performed by MacLennan & co-workers in 1996.² They found that the overall use of at least one non-medically prescribed alternative medicine was 48.5 %,

and that the majority of these were non-prescribed vitamin and mineral supplements. They calculated that Australians spent approximately \$621 million dollars annually on supplements and other alternative medicines; almost twice as much money as that spent on pharmaceutical drugs. Furthermore, in 2000 the same researchers discovered that there had been a 120% increase in the amount spent annually on supplements and other alternative medicines since 1996.³

Reasons for taking supplements

When asked why they take vitamin and mineral supplements, many people explain that it is because they fear that they may not be getting enough from their food alone, and that our food supply is somehow lacking in the nutrients we need to stay healthy. In reality, nothing could be further from the truth — this single misconception is largely responsible for the widespread unnecessary use of these supplements.

Nutrient Depletion

The source of this misconception probably comes from advertising material pushed by supplement companies; often making vague, generalized statements about it being difficult to obtain adequate vitamins and minerals from our food supply, due to farming techniques, nutrient depletion and processing methods.

US Senate Document 264

A frequently cited source of this information is known as *US Senate Document 264*. Below is an extract from this document;

Do you know that most of us today are suffering from certain dangerous diet deficiencies which cannot be remedied until depleted soils from which our food comes are brought into proper mineral balance?

The alarming fact is that foods (fruits, vegetables and grains) now being raised on millions of acres of land that no longer contain enough of certain minerals are starving us — no matter how much of them we eat. No man of today can eat enough fruits and vegetables to supply his system with the minerals he requires for perfect health because his stomach isn't big enough to hold them.

Donald Davis PhD, of the University of Texas, Austin, located this document and discovered that it is merely a reprint of a baseless opinion piece that originally appeared in

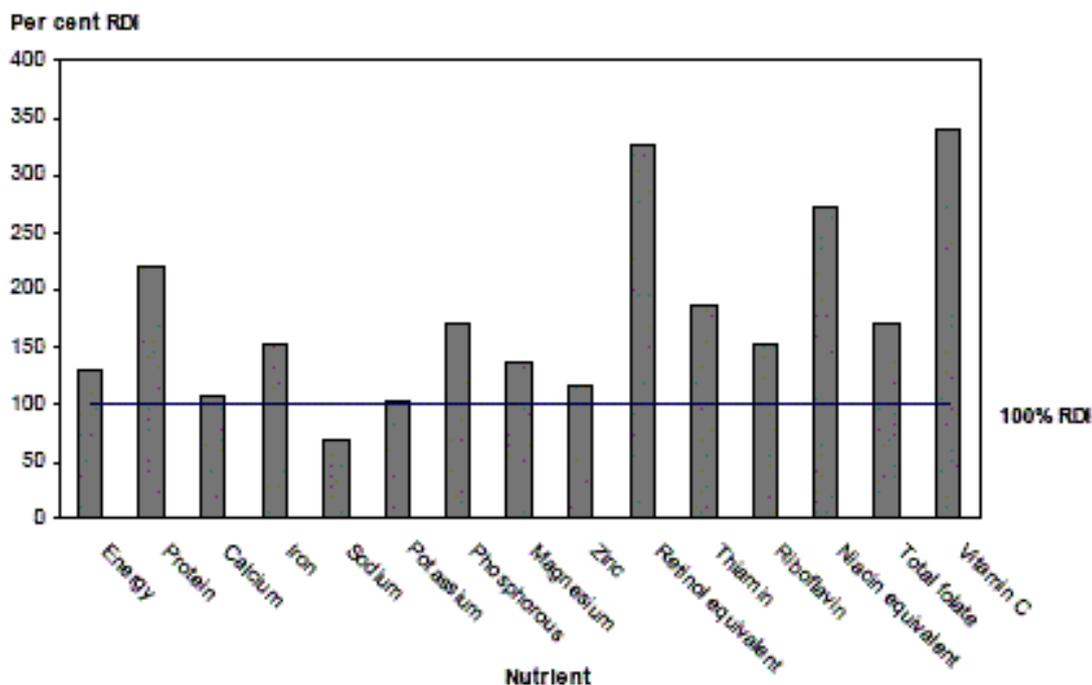
the June 1936 issue of *Cosmopolitan* magazine and was placed into the Congressional record by a Florida senator. It did not arise from any government research study, or any scientific study at all; it was simply a speculative opinion that happened to catch the attention of a US politician. Davis presented his findings in the November, 1937, *Townsend Letter* and reported it to the National Council Against Health Fraud (NCAHF), who have since published warnings to consumers to be wary of those citing this erroneous document as evidence of nutrient depletion.⁴

Nutrient Availability

A few years ago, the Australian Institute of Health and Welfare published a report which examined the supply and availability of nutrients in Australian foods, as well as their apparent consumption. The food consumption data was derived from *The Apparent Consumption of Foodstuffs* compiled by the Australian Bureau of Statistics (ABS). The report estimated the nutrient content

in the food supply of all foodstuffs available for consumption by the Australian population, from which assessments could be made as to whether the nutrients available for consumption are adequate to meet the needs of the population. The results of this data take into account the expected nutrient losses that may occur from various processing and cooking techniques, and also other potentially confounding variables, so that the data accurately reflects actual nutrient consumption by consumers. The results indicate that the supply of nutrients available remains relatively constant over many years and that the Australian food supply is characterized by an abundance of macronutrients, as well as vitamins and trace minerals. The following graph represents the nutrient consumption per capita, in relation to the Recommended Dietary Intake (RDI) levels.⁵

Evidently, the availability of nutrients in the food supply substantially exceeds the RDI levels. Other studies which have examined the

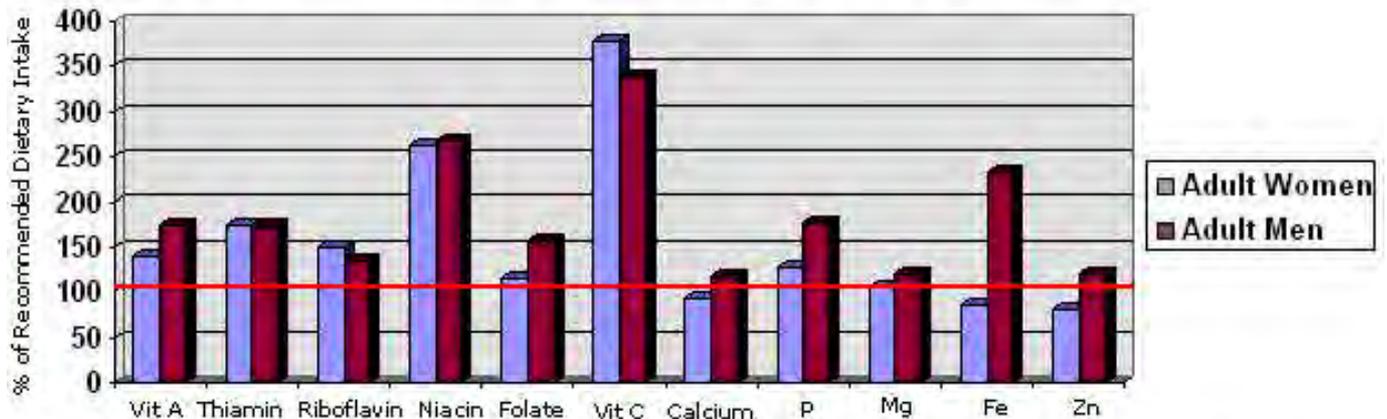


Note: Sodium data do not include salt added to processed foods or discretionary salt use.

Figure 2: Apparent per capita consumption of selected nutrients as a percentage of RDI, 1997-98

Money Down the Toilet

Vitamin and Mineral intakes of Australian adults. (% RDI)



Source: Australian Bureau of Statistics. National Nutrition Survey: Nutrient Intakes and Physical Measurements Australia

composition of foods in various areas of the world have also indicated that there is generally an abundant supply of nutrient availability in foods consumed in Australia⁶⁻⁸ as well as Great Britain⁹ and the United States.¹⁰

Nutrient Intake

This evidence clearly shows that the vitamins and minerals are there in our food supply, however many people may believe that they are not getting enough of them due to poor dietary habits. Once again, this is a common misconception.

Throughout 1995, the Australian Bureau of Statistics surveyed approximately 16,400 homes evenly distributed throughout Australia, collecting data for the National Nutrition Survey.¹¹ The purpose of this study was to provide insight into the dietary habits of Australians and assess what areas of nutrient intake were of the greatest concern. The information collected by ABS researchers revealed that the average vitamin and mineral consumption among adults was generally greater than RDI levels, as represented by the graph above (in relation to RDI levels).

Recommended Dietary Intakes – a bare minimum?

Another common misconception is that the Recommended Dietary In-

take (RDI) levels (also called Recommended Dietary Allowance (RDA) in the US), are the bare minimum levels of specific nutrients needed to avoid a deficiency, and that it is somehow advantageous to obtain much higher levels.

The RDI for vitamins and minerals are devised by the National Health and Medical Research Council, and are designed to be greater than the actual physiological requirements; thus providing a kind of metabolic 'safety net'.¹² They state:

Recommended Dietary Intakes (RDIs) are the levels of essential nutrients considered adequate to meet the nutritional needs of most healthy individuals. They are based on estimates of requirements for age and sex groups and, therefore, apply to group needs. As they incorporate generous factors to allow for variations in metabolism, absorption and individual needs, RDIs exceed the actual nutrient requirements for practically all healthy people. Therefore, they are not synonymous with requirements.

Issues to be taken into account when comparing population intakes with RDIs include:

- *The RDIs exceed the actual nutrient requirements for practically all healthy people, as described above;*
- *The proportion by which the RDI exceeds the mean physiological re-*

quirement differs between nutrients. Some RDIs incorporate more generous factors to allow for variation in absorption and metabolism. It is therefore not possible to compare directly the proportion who exceed the RDI for different nutrients.

To give an example, the minimum amount of Vitamin C needed to prevent and cure a deficiency (scurvy) in adults is approx 5-10mg/day^{13,14} yet the RDI is set at 60mg/day in Australia¹² and even larger in the US.¹³ Our plasma concentrations become 'full' at around 200mg/day, at which point we start to excrete excess levels. Although excess amounts are excreted, they alter the equilibria of various biochemical pathways in the body (in the case of vitamin C, the synthesis of certain sex hormones can be disrupted, resulting in alterations in the ratio between progesterone and oestrogen which may induce miscarriage in early pregnancy.¹⁴) Most studies indicate that in healthy people, amounts greater than the RDI do not appear to be helpful. With a few exceptions, little or no evidence exists to support the notion that larger than RDI levels of micronutrients are needed for 'optimum health'; in fact, 'mega' doses of certain nutrients such as vitamin A, Niacin, vitamin B6, vitamin D, folic acid, iron and selenium can very easily become toxic.¹⁴

When are supplements appropriate?

Not all vitamin and mineral supplements are entirely worthless. There are certain conditions that may necessitate the use of dietary supplements.¹⁴ Some examples include:

- Folic acid among women of child-bearing age
- Therapeutic administration of folic acid, vitamin B6 and vitamin B12 to control homocysteine metabolism in those with elevated levels.
- Calcium and Vitamin D for people (especially the elderly) who do not consume adequate amounts of dairy food.
- Iron in female vegetarians who have low haemoglobin or those who are being treated for iron deficiency anaemia.
- Iron and / or vitamin B12 in vegans to prevent or treat anaemia.
- Certain medical conditions such as cystic fibrosis or celiac disease may necessitate the therapeutic administration of large doses of certain nutrients due to a diminished ability to absorb them. Some elderly people may also need B12 supplements due to a diminished capacity to absorb it as a result of low gastric acidity.
- Large therapeutic doses of certain vitamins may be of use in treating certain medical conditions (eg, niacin for high cholesterol, Vitamin B6 for carpal tunnel) however are generally less effective than other pharmacological treatments.

Is poor nutrition a problem?

Given this information, one may reasonably ask why the prevalence of dietary related diseases is so significant if the population is obtaining adequate levels of vitamins and minerals. To put it simply, there is a lot more to good nutrition than just vitamins and minerals. Too many people's diets are excessively high in unused energy, saturated fats, salt and added sugar, whilst not containing adequate levels of fruit, vegetables and whole grains.¹¹

Why are plant foods so protective?

Population studies have revealed that diets high in whole grains, fruits and vegetables significantly decrease the risk of many diseases such as cardiovascular disease^{15,16}, type 2 diabetes^{16,17} and certain cancers.^{18,19} Precisely what substances in these foods that are responsible for their protective effect has been the subject of much investigation. Following this line of thought, however, has thus far led researchers to no certain conclusion.

For example; a lower incidence of lung cancer was observed among high consumers of carrots as well as other red and orange coloured vegetables in population studies.²⁰ These foods are known to be rich in carotenoids, most notably beta-carotene; a precursor form of vitamin A. Because beta-carotene possesses significant anti-carcinogenic activity in laboratory studies,²¹ it was assumed that it was the beta-carotene in these veggies that was responsible for the apparent protection against lung cancer.

This led to several large clinical trials which involved giving either a placebo or a large dose of beta-carotene to high risk subjects for several years.²²⁻²⁴ The combined results of these trials was adequately summed up by the authors of *Physicians Desk Reference for Nutritional Supplements*¹⁴, which states:

...three other large intervention studies in normally nourished subjects, long-term smokers, former smokers and those exposed to asbestos found no overall benefit from high-dose beta-carotene. Moreover, in one of these studies, there was a significant 18% excess incidence of lung cancer among those who received beta-carotene supplements.

Evidently, whatever the substance in carrots and carotenoid-rich vegetables was that was protecting people against lung cancer was not the beta-carotene. So what was it?

Phytochemicals

Ultimately, it is not known what substances in plant foods are respon-

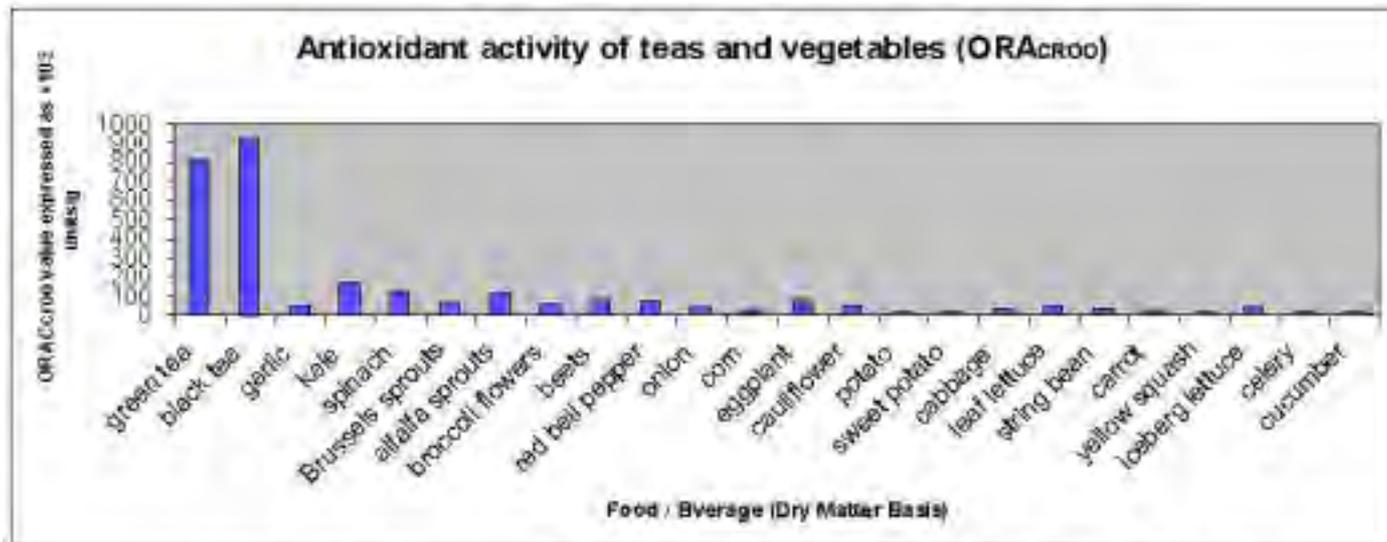
sible for their protective effect; clinical trials testing individual nutrients in the treatment or prevention of cancer and heart disease have generally resulted in disappointing outcomes. There are potentially hundreds, if not thousands, of substances present in plant foods referred to as 'phytochemicals'. Many phytochemicals have been identified as having various protective effects including protection against cancer;²⁵ however there are several factors that need to be considered:

1. There are far too many phytochemicals to study; some of them may not have even been identified yet.
2. There are far too many of them to simply put into a supplement pill.
3. Most importantly, the beneficial effect that consumption of plant foods have, more than likely comes from consuming the combinations of many phytochemicals found in fruits and vegetables, rather than just a small handful of them found in supplements.²⁶

Consequently, taking supplemental doses of only a small number of these phytochemicals is a poor substitute for eating plant foods. We may never identify the specific phytochemicals or combinations of phytochemicals responsible for the cardioprotective and chemoprotective effects that fruit and vegetable consumption has demonstrated in population studies. Put simply, if you want the protective effect of eating fruits, vegetables and whole grains, you have to eat them — there is no other way.

Juicing

It is also important to note that many of the beneficial substances present in plant foods are found in their skins and fibrous content/roughage.^{27,28} Consequently, drinking fruit and vegetable juices, whilst providing some phytochemicals, is a poor substitute for eating them whole, and generally provides a very dense source of sugar.²⁹



Cao G, Sofic E, Prior H. Antioxidant capacity of tea and common vegetables. *J Agr Food Chem* 44: 3430-3431, 1996

Antioxidants – not all are equal

Antioxidants have become a much talked about issue in the media. Antioxidants help to defend against free radicals which disrupt DNA, oxidize lipids and damage cell membranes — all factors that contribute towards the causation of both cancer³⁰ and cardiovascular disease.³¹ Unfortunately, there are two factors that need to be considered in regards to antioxidants. The first is that there is a lot more involved in the pathogenesis of these diseases than simply free radical attack.³² The second is that whilst various plant foods provide substances that do possess significant antioxidant activity, the same substances also possess a plethora of other actions that help defend against disease. Substances whose only mechanism of action is an antioxidant one may help to defend against free radicals, but may not help to defend against the many other factors involved in the development of these diseases.

To give an example, it is known that large supplemental doses of the antioxidant vitamin alpha-tocopherol (vitamin E) decreases the susceptibility to low-density lipoprotein (LDL) 'bad' cholesterol oxidation (which is a significant contributing factor in the pathogenesis of coronary heart disease).³³ Population studies have revealed that diets high in vitamin E rich foods such as nuts,³⁴ olive oil³⁵

and whole grain cereal foods¹⁶ significantly decrease the risk of heart disease. Despite these observations, large well-designed clinical trials have generally failed to find any reduction in the incidence of heart attacks between subjects given vitamin E supplements, and those given a placebo over several years.³⁶

To give another example, this time using cancer as the model; it is well known that tea, particularly green tea, possesses a very potent antioxidant action (far greater than that of vitamin E). The graph (above) compares the antioxidant activity of tea with various vegetables.³⁷

Despite having such a powerful antioxidant activity, the majority of well designed population studies have found little if any significant reduction in the risk of cancer among drinkers of both green and black tea.³⁸⁻⁴² On the other hand, a majority of well designed population studies have demonstrated a significant reduction in the risk of cancer¹⁸ and cardiovascular disease¹⁵ associated with higher intakes of fruits and vegetables, despite having an antioxidant action considerably less powerful than tea. It is important to understand that many of the substances found plant foods such as whole grains⁴³ fruits vegetables⁴⁴ (and even tea⁴⁵) also possess a wide range of protective mechanisms, only one of which is an antioxidant action.

Antioxidant Nutrients

Unfortunately, some people may be under the impression that taking large doses of certain antioxidants may be all that is required to help protect against diseases such as cancer. Vitamins C, E, beta-carotene and Selenium are all essential nutrients, and all possess an antioxidant activity. Due to their antioxidant activity, it was thought that they may help to defend against cancer.

In 2004, a review of 14 clinical trials involving more than 170,000 people published in *The Lancet*, found antioxidant vitamins C, E and beta carotene offered no protection against cancer.⁴⁶ This study provided strong evidence that antioxidant vitamin supplements are not effective in protecting against cancer. It was of concern to note that this review found a small increase in mortality among people taking antioxidants compared with those given a placebo.

Vitamin and Mineral Supplements – The bottom line

Population studies have found strong evidence that higher consumption of plant foods such as fruits, vegetables and whole grains can significantly decrease the risk of serious diseases such as cardiovascular disease, diabetes and certain cancers. It is not known precisely what substances in these foods are

responsible, as there are so many of them; many having a diverse range of potentially protective biochemical mechanisms. Whilst they are good sources of vitamins and minerals, most people can, and do, get enough vitamins and minerals from their diets, and do not need additional doses in the form of supplements. Additionally, while plant-foods do contain substances that have an antioxidant activity, they also possess various chemoprotective and cardioprotective mechanisms that antioxidant vitamins do not. Based on the available data, it is recommended that we consume at least two serves of fruit and five serves of vegetables per day, as well as replacing refined grain foods with whole grain foods and including several serves of legumes per week.⁴⁷

As stated previously: if you want the beneficial effect of fruits and vegetables, you have to eat them — there is no other way.

What about other supplements?

Although many of the most popular dietary supplements contain vitamins and minerals, the other types of supplement products available on the shelves in health food stores sold as 'listed therapeutic goods' are classified as 'functional food' supplements, or herbal medicines; not all of which are entirely worthless.

Functional Food Supplements

Although their efficacy in the treatment of acute or chronic medical conditions may be limited (their use is probably more effective in combination with other treatments), certain 'functional food' supplements may be of value as an addition source of functional nutrition, thus potentially contributing towards disease prevention. Although the discussion regarding the use of these supplements lies beyond the scope of this article, suffice to say, that many of these supplements may be of some

worth, but are generally poor [and expensive] substitutes for the foods they are replacing. Briefly, some examples include:

Fish Oil — Higher consumption of fish is associated with a decreased risk of cardiovascular events, asthma and cognitive/behavioural problems, presumably due to the Omega 3 fatty acids DHA and EPA. Clinical trials have demonstrated that fish oil supplementation may be an effective treatment for some of these problems.⁴⁸ Fish however is also a rich source of vitamin D and selenium which fish oil supplements are not.



Popping supplement pills is a poor substitute for a healthy diet
Photo courtesy of Chi Tan, with thanks.

Garlic — Garlic is truly a healthy vegetable which may decrease the risk of gastro-intestinal cancers,⁴⁹ however garlic is only one of many healthy vegetables; consequently, it only replaces one of them. Garlic supplementation has demonstrated modest alterations on a number of cardiovascular disease 'risk factors'⁵⁰, however has yet to demonstrate a decrease in actual cardiovascular events (ie, heart attacks or strokes).

Flax seed oil — Flax seed is a rich source of phytoestrogens, lignans and essential fatty acids; all which contribute towards its healthful effects. Flax seed oil, however, is a poor substitute because most of the beneficial effect is due to the substances present in the fibrous flax seeds, not just in its oil.⁵¹

Grape Seed Extract — Grape seeds are a rich source of antioxidant phytochemicals which may possess a

range of cardioprotective mechanisms. Thus far, however, most of the evidence to support this notion comes from laboratory studies.⁵²

Green Tea Extract — Green tea may have some healthful benefits, however, at least some of that benefit comes from being absorbed in the mouth and present in the saliva — something which does not occur upon administration of a green tea extract capsule.⁵³

Probiotic Supplements — Preliminary evidence from clinical trials have demonstrated a range of potential medicinal uses of lactic acid bacteria supplements, however more research is needed.⁵⁴

Plant sterols, stanols and wax alcohols — These substances are extracted from plants and are used in therapeutic doses to treat high cholesterol levels (hyperlipidaemia). They are especially effective in combination with statin drug therapy. They are usually added to foods such as margarine, however are available as supplements as well.

Despite their efficacy in cholesterol lowering, whether they decrease the risk of heart attacks is yet to be adequately demonstrated in well designed clinical trials.^{55,56}

Glucoamine and Chondroitin — Glucosamine sulphate and Chondroitin sulphate are not exactly dietary supplements, because they do not supplement anything that would naturally occur in our diet, and are therefore more like a drug or medicine. They do appear to be more effective than a placebo in the treatment of osteo-arthritis.⁵⁷

Vegetable Juice Extract Supplements — Generally provided as powders, they are usually made of the solidified extracts of vegetable juice. The health benefits of these supplements are most likely comparable to that of juicing.⁵⁸

Psyllium Husk — Usually consumed as a powder, psyllium husk is often used as a fibre supplement. As

Money Down the Toilet

is the case with other foods rich in soluble fibre, preliminary evidence suggests that in significant quantities, psyllium husk may be effective in the treatment of chronic constipation⁵⁹ and may lower serum cholesterol and glucose levels.⁶⁰

Herbal Medicines — A significant portion of the products found in health food stores are not dietary supplements but herbal medicines. The difference between a dietary supplement and an herbal medicine is that a dietary supplement is designed as just that — a supplement for a food or nutrient. That is, they provide approximate levels of that food that would be obtained from dietary sources. Herbal medicines are either derived from plants which are not intended to be eaten, or are made from highly concentrated extracts of certain foods, which provide levels not normally provided by dietary means. Dietary supplements are generally meant to substitute a component of a diet, whereas herbal medicines are specifically meant for medicinal purposes — that is, they are used to treat specific medical conditions.

Of course, there is some overlap in this definition, as many products sold as herbal medicines are simply extracts of a food designed to provide a high-dose supplemental form of that food — garlic being a typical example. Additionally, many herbal medicines can be taken as an infusion or tea, in which case, although they are being used for medicinal purposes, they are contributing to one's diet. Consequently, there is not a clear-cut definition, as some overlap exists between dietary/nutritional supplements, functional food supplements and herbal medicines.

It should be noted that herbal medicines designed for medicinal purposes often come from plants which are not meant to be consumed ordinarily, and although they may be 'natural', they can contain highly concentrated extracts of pharmacologically active substances. Consequently, they are acting as a drug, and should be treated with the same precautions as a drug. Many

can have unfavourable side effects or can react adversely with other medications. Some can also be toxic if not used correctly. Whilst there are a few herbal medicines which have been thoroughly studied, many have not been, so available information is often based on anecdotal accounts or 'traditional' uses. Although some herbs have demonstrated efficacy in managing certain diseases, they are generally not the best choice for primary pharmacological treatment.⁶¹

More Information

If you would like some reliable information on specific dietary supplements or herbal medicines, here are some good websites:

Sloan Kettering — About herbs, botanicals and other products. This website provides some good reviews of the scientific data available on various herbs and dietary supplements. Available at: www.mskcc.org/mskcc/html/11570.cfm

PDR — Physicians Desk Reference. This website has some good reviews on nutritional supplements, however its information on herbal medicines is unreliable, as it is based largely on 'traditional' uses instead of scientific evidence. Available at: www.pdrhealth.com

Medline Plus: Herbs and Supplements. — Provides scientific reviews on various popular herbs and supplements, and is published by the National Institute of Health's National Library of Medicine. Available at: www.nlm.nih.gov/medlineplus/druginfo/herb_All.html

HerbMed — Provides collations of scientific literature available for various herbal medicines, however does not cover all herbs, and some require payment to access. Available at: www.herbmed.org

Quackwatch — Excellent, scientifically accurate, information on various forms of complementary and alternative medicine including some supplements. Available at: www.quackwatch.org

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Exorcisms, Fictional and Fatal

In late 2005, a new film about exorcism was released in America and became a minor hit. *The Exorcism of Emily Rose*, starring Laura Linney and Campbell Scott, is about a priest accused of negligence resulting in the death of a nineteen-year-old woman during an exorcism. While demons, devils, and exorcisms are obviously great grist for horror films, *The Exorcism of Emily Rose* is interesting because it shows (however fictionally) the potentially dangerous consequences of exorcisms. (For my sceptical review of the film, see www.radfordreviews.com/cgi-bin/view.pl?m=mod&type=article&name=exorcism)

As the film opened across the country, a Romanian priest stood accused of just such a crime in real-life. An exorcism at a convent in the small Romanian town of Tanacu resulted in the death of Maricica

Irina Cornici, a twenty-three-year-old nun who said she heard the devil telling her she was sinful. With assistance from four nuns, priest Daniel Corogeanu bound Cornici to a cross, gagged her mouth with a towel, and left her for three days without food or water. The ritual, the priest explained, was an effort to drive devils out of the woman. Cornici was found dead on June 15, 2005; an autopsy found she had died of suffocation and dehydration. Cornici, who had a history of schizophrenia, reportedly had recently visited the convent and soon after joined the order. The Orthodox Church admitted that Corogeanu had been ordained as a priest without completing his theological studies, and condemned Cornici's death.

While many Americans likely think of exorcisms as relics of the Dark Ages, exorcisms continue to be performed, often on people who are emotionally and mentally disturbed. Whether those undergoing the exorcism are truly possessed by spirits or demons is another matter entirely. Most often, exorcisms are done on people of strong religious faith. To the extent that exorcisms "work," it is primarily due to the power of suggestion and the placebo effect. If you believe you are possessed, and that a given ritual will cleanse you, then it just might. (For more on exorcisms, see Joe Nickell's Investigative Files column in the January/February 2001 issue of *Skeptical Inquirer* magazine.)

A 2001 book on the topic, Michael Cuneo's *American Exorcism: Expelling Demons in the Land of Plenty* found no reason to think that anything supernatural occurs during

exorcisms. After attending fifty exorcisms, Cuneo is unequivocal about the fact that he saw nothing supernatural—and certainly nothing remotely resembling the events depicted in the 1974 blockbuster film *The Exorcist*. No spinning heads, levitation, or poltergeists were seen, though many involved some cursing, spitting, or vomiting. As far as science is concerned, possession is a mental health issue.

Maricica Cornici is not the first innocent victim of an exorcism. On August 22, 2003, an autistic eight-year-old boy in Milwaukee was bound in sheets and held down by church members during a prayer service held to exorcise the evil spirits they blamed for his condition. An autopsy found extensive bruising on the back of the child's neck and concluded that he died of asphyxiation. In the past ten years, there have been at least four other exorcism-related deaths in the United States alone, two of the victims were children. Then there are several tragic cases like that of Texas mother Andrea Yates, who drowned three of her children in an effort to exorcise the devil from herself in 2001. More recently, a South African couple was arrested for keeping their fifteen-month-old daughter caged, unfed, and tied up because they believed the child was possessed.

Exorcisms in film and fiction can be entertaining, while exorcisms in real life can be fatal. The tragic irony is that in many cases the evil is committed not by the Devil, but by those who believe in him.



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The Root of All Evil?

The Root of All Evil?

Channel 4 (UK) production featuring Professor Richard Dawkins

I sometimes disagree with my friends about Dawkins' approach to debating religious people. I have seen him be extremely (and unnecessarily) rude to people who have been expressing their faith, and this can come across as arrogance and bullying. This sort of conduct can often be counterproductive and provide ammunition for those who claim that atheists are either boorish buffoons or people who are just pushing a religion of their own. (In some cases these impressions are correct, of course.) Before the DVD arrived at my place I had read two reviews of the program, one written by a scientist and one by a believer, and what I had read had prepared me to have my prejudices about Dawkins reinforced. All I can say is that the reviewers either watched



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another version of the show or playing the thing upside-down relative to England changes things. (Perhaps it's the Coriolis force that makes the water go down the other way in the bath acting on the DVD player. This could explain why DVDs from one region won't play in another, but I digress ...).

Yes, Professor Dawkins was firm with the people he talked to, even on the occasions when his politeness and patience were obviously being stretched, but the people he talked to deserved firmness. It is rare that anyone challenges religious nutcases about their faith (and there were several nutcases exhibited here), but it is interesting and informative to see the rationalisation that can go on to justify belief not only without evidence (because that is what faith is) but belief in the face of contrary evidence. It was scary, but not surprising, to see that the principle of the end justifying the means is still in good health, as well as the hypocritical notion that religious texts are absolutely inerrant in those places where the reader or preacher likes what is written but are just allegorical guides elsewhere.

Dawkins likens religion to a virus, and in some ways I agree with him. It seems to be something that people catch, particularly children who catch it from their parents. He makes the point that children are labelled by the religion of their parents but you would be thought mad (or at least a little strange) if you insisted on classifying children by the political parties their parents vote for, the types of cars the parents drive, or the music styles that the parents prefer. All of these are choices, and religion should be

a choice also. Nobody is born with beliefs and faiths, but children are born with the innate need to obey authority figures. This is so that parents can pass on knowledge about dangers and other lifestyle matters of importance, and we would not be here unless our ancestors managed to avoid falling off cliffs and being eaten by wild animals. It is sad to see this evidence and product of our evolution being misused to propagate unscientific and often ridiculous ideas. It is of course much worse when children are not only taught nonsense but are quarantined from any other children (and even adults) who might have been taught different things.

This an excellent program. If you get a chance to see it on your local station, don't miss it. I do have one small quibble with the consistency of Professor Dawkins' opinions, though. He seems to believe that nothing good or even useful has ever come or could ever come from religion. I wonder if when he is walking around the grounds of his employer, Oxford University, he ever gives a thought to who might have started the teaching there in 1096. But that was a long time ago.

Note

To date no TV channel in Australia appears to have taken up this programme. Feel free to lobby your network of choice.



Is Depression Curable?

Talk given by Nigel Sinnott to Victorian Skeptics on Feb 20, 2006

On January 16 this year, Dr Geoff Gallop announced his resignation as premier of Western Australia and as a member of the state parliament because he was suffering from depression. In his resignation speech, reported on the front page of *The Age* on January 17, Dr Gallop admitted that “Living with depression is a very debilitating experience” and that he had “sought expert help”. He then added: “My doctors advised me that, with treatment, time and rest this illness is very curable”.¹

In the following day’s *Age* there was an article by Jeff Kennett, former premier of Victoria and now chairman of BeyondBlue, the so-called “national depression initiative”. Mr Kennett informed readers that “depression is an illness, it is not a weakness, and it can be cured or managed”.²

Well, every illness can be managed or treated, but can depression really be “cured”?

A real cure for depression would almost certainly receive the same public adulation as a cure for AIDS, Alzheimer’s disease or schizophrenia: massive world-wide media attention and one or more Nobel Prizes. Have I been asleep and missed something?

Almost anyone who has sought help for depression, or who has dealt with people who are depressed, knows that treatment for depression gets very mixed and uncertain results. This alone should raise doubts about the claim that depression can be cured, but what makes the claim particularly outrageous is that, because present day knowledge of depression is far from perfect, and experimental methods for evaluating treatment of mental illness have grave limitations, it is quite impossi-

ble to devise a protocol for unequivocally demonstrating that anything does or does not or could cure depression.

To show scientifically that a type of treatment cures depression we would need to establish that remedy X, and nothing else, has clearly put an end to all symptoms of depression in subject Y and preferably in a few other subjects. We would also need proof that we can rely — beyond doubt — on the beneficial result being either very long term or preferably permanent.

In the real world, however, depression can “get better” spontaneously (in the absence of any treatment) and sometimes return years later. This makes it difficult to establish that improvement, while taking an antidepressant drug or undergoing a course of psychotherapy, has really been caused by the treatment. Furthermore, someone taking an antidepressant may not get better or may report improvement. Patients who report improvement may feel well only as long as they continue the treatment, and will relapse very soon after they go off the drug. Others will continue to feel well long after stopping the drug; and still others will relapse (will feel depressed again) while still taking the drug. (In other words, the benefit seems to have “worn off” in these cases.)

If someone feels better after a course of treatment, no objective test whatsoever is available to establish or predict that the person will never feel depressed again, years later.

The sort of people who claim that depression is curable are probably those who want to give the public only “the good news” about depression. They imagine, I assume, that a diet of undiluted “good news” will make depressives happier and more hopeful.

This is patronising piffle, and, in the long term, very harmful drivel. Such spouters of platitudes remind me of the arrogant notion back in the “bad old days” that telling “little white lies” to women, children and servants was justifiable because it kept them contented and docile. You might get away with lying to a depression patient once, or even twice, but eventually the patient will become angry and distrustful, and will come to regard consulting mental health professionals as a waste of time and effort. The result: a disillusioned, despairing and — worst of all — isolated depressive!

I have suffered from depression in varying degrees for fifty years. My maternal grandmother was almost certainly a chronic depressive as well. She committed suicide in 1968.

There is, however, a mite of potentially encouraging news in the area of depression research. I emphasise the words *potentially encouraging*. Researchers in the United States have identified a brain protein, called P11, that affects serotonin levels, and serotonin and depression are known to be linked. It seems that low levels of P11 correlate with depression and high levels with hyperactivity. What is not yet known is how to increase the amount of P11 in the brain cells of depressed people.³

1. *The Age*, Jan 17, 2006: p1. For the next few days I scanned the newspaper closely for any claim that Geoff Gallop had misunderstood or misquoted his doctors. I have seen no denial, so I see no reason to doubt that the doctors did say that depression was “very curable”.

2. “Now it’s up to the rest of our leaders to match Gallop’s courage”; *The Age*, Jan 18, 2006: p15.

3. Andy Coghlan, “Found: a dimmer switch for depression”; *New Scientist*, Jan 14, 2006: p13. Paul Greengard, *Science*, v. 311: p77.

Miracles, Prayers and Other Holy Land Oddities

I have recently spent some time in Israel. On the morning of arrival, I read Israel's leading newspaper (*Yediot Aharonot*). On page two, there was a title that included the word miracle. It reported the story of a man who was on a train that crashed into a car at a level crossing. He was quoted as saying that he was thrown around and knocked hard, and that there was glass everywhere, and that it was a miracle that he did not die. Well, it was an even bigger miracle than you would guess, because later in the piece it is reported that he was treated on the scene by paramedics and sent home with no serious injury. The miracle did not extend to the driver of the car, who died at the crash. (During my visit to Israel, there have been five level crossing accidents between cars and trains. Each has been recorded as a miracle, either because nobody died, or because not as many people as could have died, did. It looks like god works very hard to create miracle opportunities, sparing no life in an effort achieve maximum impact).

The next day brought another miracle story in the same newspaper, this time on page three. It involved the fall of a child from a third floor balcony, which resulted in serious head and back injuries. The child was still alive as the paper went to press, but he was in a critical and unstable condition. That he was alive was attributed to a miracle. Why the miracle maker could not extend the gesture to the child not losing his balance and falling in the first place, has not been reported.

From that point, I decided to keep track of reported miracles; after all, where else but the Holy Land would you expect to have an abundance of interventions by god? I read the pa-

per each day, looking for the word miracle in a title, and noted the page on which it first appeared. In over five weeks, I only reached page five once. Page four accounted for about half of all miracle reports, and pages two and three (often printed as one wide page in the tabloid format of the two major Israeli papers) accounted for all the rest except for one front page miracle.

That miracle report deserves special attention, because it was just one of many that related to the stroke suffered by Prime Minister Sharon on January 4. Most mentions of miracles were actually about people hoping or praying for a miracle (the PM's office has even issued a statement that they are "expecting a miracle" — no less), but the miracle that made it to page one has to do with a very famous rabbi who, as reported, was asked by Sharon's family (who are known as a very secular family) to pray by his bedside. On leaving, the rabbi reported that Sharon had opened his eyes for the first time as soon as he finished his prayer. This was obviously attributed to god's response to the prayers. Why god would need somebody to actually be at the sick person's bedside to make the link has not been reported, but I couldn't help think these people do not think much of their god.

As details started to come out over the next two days, it became known that while the rabbi was at Sharon's side, Sharon's son played him a recording of his young son (Sharon's grandson) asking him to wake up. This, it was reported, caused Sharon to open his eyes. Nothing was now said about any conflict with the prayer (synergy at work, perhaps?) and it was still deemed a miracle. Finally, the doctors started talking. The hospital spokesperson (a medi-

cal doctor) said to the press that Sharon did not open his eyes. He may have moved his eyes a bit, but that happened fairly often and did not suggest any change in his condition. So much for a miracle.

The prominence of prayers did not stop at Sharon's bedside. References to prayers were made in the most unexpected places. None was as unexpected as hearing the evening news anchor on Israel's public television service say "god willing" (*be'ezrat hashem*) on several different occasions. Here is a secular person, who enjoys public standing that can perhaps be compared to that enjoyed by Ray Martin in Australia, using a superstitious, religious saying as if it were the most obvious thing to say. If that were a worry, the responses of people I talked to about this occurrence were downright depressing. Most people simply did not understand what the problem was, and I should emphasize that I'm not referring to religious people.

Several other religious habits seem to be taking hold among secular society. Prominent among those is the kissing of the mezuzah, a roll of parchment carrying a prayer that is enclosed in a small compartment and stuck to the right hand side of all entrances except for toilets (when I lived in Israel, I had a mezuzah too, but the parchment had been replaced by a team photo of Manchester United). Since it is easy to distinguish religious Jews from non-religious ones by the differences in dress code, I was astonished at the number of non-religious people who perform this superstitious act, which even some religious people do not perform.

Another such habit is the imprinting of an acronym for the Aramaic

Continued p 67 ...

Supernatural Selection: Intelligent Design and the Evolution of Creationism

Evolution occurs in the oddest places

In 2005, in response to the very successful public campaign by advocates of 'Intelligent Design', both in the US and in Australia, the editors of *Nature Australia*, the Australian Museum's prize-winning magazine (founded 1922), asked me to write a response to ID, for "The Last Word" column in the Autumn 2006 issue.

Seeking a new angle to a well-worn subject, I decided to examine the evolution of creationism. With only 700 words available to explain a complex topic, I fought for, and got, approval to include important websites explaining the background to ID. Here is my article, slightly modified.

Many long-term observers of creationist organizations must have been struck, as I have been, by the evolution of creationism over the years from crude early prototypes to the more refined and successful descendants around us today. Ironically, the gradual modification and adaptive radiation of creationism in its many guises mimics the very process that is anathema to all true creationists — evolution by natural selection as first expounded by Charles Darwin.

As in the natural world, not all of the earlier, primitive varieties of creationism have become extinct. Some have even survived to the present in protected niches alongside their more successful relatives. In the early 21st Century, the Flat-Earthers and Geocentrists are definitely endangered species nearing extinction, but the Young Earth Creationists (YECs) are still common

and widespread. The past decade, however, has seen the remarkable rise of a new mutant offshoot, the Intelligent Design Creationists (IDCs). I prefer to call them the IDEists, because when they use 'Designer' they really mean 'God' but, for tactical reasons, prefer not to mention him/her.

Progressive displacement of YECs from their ecological niches by IDEists appears to be largely due to direct competition and the latter's more effective camouflage, disguising their true colours as a pseudoscientific religious movement. This accounts for their considerable current success, especially in North America and Australia, at the top of the creationist food chain.

We can illustrate this by comparing YECs with their newer competitors, the IDEists. We haven't space here for a full analysis but fortunately, in the Age of Google, ignorance is no excuse.

YECs are clearly an obsolete creationist model locked into a literal interpretation of Biblical Genesis. YECs cite a mythical 6-day Creation Event around 6000 years ago, and a later one-year Flood Event some 4,300 years ago, to explain the Earth's geological and life history. For a colourful illustration of the latest refinement in young earth creationism check Answers in Genesis, a Qld-based YEC organization and the personal web-site of their geological spokesman, *Tas Walker's Biblical Geology* which is clearly based on Bishop Ussher's 17th Cen-



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tury model! www.uq.net.au/~zztbwalk. Note that it is accessed on the University of Queensland's website — presumably seeking respectability by association!

For decades YECs have tried to infiltrate their creationist model into science classes of American schools. They have failed because of its overtly Biblical basis and thanks to the protection of the US Constitution. Australia unfortunately lacks constitutional protection against teaching religion in its science classes.

Observing the YECs' lack of success, their successors, the IDEists, have regrouped, mutated and evolved a new attack strategy. They have abandoned the *Book of Genesis* and replaced it with the less confrontational *Book of John* ("In the beginning was the word....") and have even tossed out the six-day Biblical Creation and Flood — the very basis of young-earth creationism.

In their version of creationism the IDEists have resurrected an early 19th Century model, propounded by William Paley (1803) with his 'watchmaker' analogy (aka Argument from Design). The IDEists have skilfully refined this and repackaged it with a snappy new label, 'Intelligent Design'.

By accepting and incorporating many of the discoveries (but not the conclusions) of modern science the IDEists have achieved remarkable public success with their books and DVDs, some of which are coming to schools near you. The ID movement

has even received public endorsement from no less than President George W. Bush in the US and from Dr Brendan Nelson, Federal Minister of Education, Science and Training in Australia!

For those confused by claims that ID represents an alternative scientific view of origins, a recent book, *Intelligent Design: Creationism's Trojan Horse* by Barbara Forrest and Paul Gross, documents why ID is a pseudoscientific religious assault on science. For an on-line summary see 'A Conversation With Barbara Forrest' at www.au.org/site/PageServer?pagename=cs_2005_02_special

Here in Australia you and your children may soon encounter a documentary video called *Unlocking the Mystery of Life* (UML). Produced by the 'Intelligent Design' movement in the US, this is currently being heavily promoted here in DVD format by fundamentalist Christian groups. I have seen it. UML is a very slick presentation. To non-scientists it will appear very convincing. It combines the skills of modern computer animation with the tricks of a fair-ground hustler to create the misleading impression that there is a genuine controversy amongst scientists about the Theory of Evolution and that 'Intelligent Design' is the answer. For a scientific review of the DVD *Unlocking the Mystery of Life*, see www.talkdesign.org/faqs/bottaroslettertoWNYE.html — it makes interesting reading.

Conclusion

Intelligent Design is supernatural selection, not natural selection. It is not science and it has no place in our school science classes or our museums.

Footnote

Unfortunately, you will never have an opportunity to read the above article (or any other article) in *Nature Australia*. Unknown to me when I wrote it, the Australian Museum's management, were planning to terminate our very fine 84 year old natural history magazine, with minimum fuss and publicity. The official announcement of its demise took place quietly in mid-December, coinciding with the publication of the Summer 2005-6 (and last) issue, and with no advance warning to subscribers. To get some idea of what we have lost, take a look at the Museum's web-site on www.natureaustralia.net/

It took some time for a public response to appear. On February 4, 2006 the ABC's *Science Show* included an item entitled "*Nature Australia* magazine closes". This feature the response of one long-time subscriber, Dr Rob Morrison of Flinders University, Adelaide and recipient of the 2002 Skeptics Eureka Prize for Critical Thinking and also of Mr Frank Howarth, Director of the Australian Museum explaining why *Nature Australia* had been terminated. You will find their responses at www.abc.net.au/rn/science/ss/stories/s1559965.htm



...Miracles from p 65

expression of "with god's help", at the top right of a written page. People do not do it so much on private writings, but many signs now have this printed on them. One of the strangest views in that respect was advertising posters with the religious acronym on them posted next to similarly sized posters showing very scantily clad young ladies.

There is a profound dichotomy in

Israel. It is a largely secular and modern country, where most people dress the same way people dress in the West; where one of the most popular singers is a transsexual; and where a vast majority do not keep kosher or go to synagogue. At the same time, religion is extremely prominent in its effects on the way people talk and on local and regional politics. This dichotomy is one of the most troubling aspects of life in Israel. The fact that so few people are

disturbed by this dichotomy is a sad indictment on Israeli society, perhaps best represented by the fact that the Israeli Skeptics Society is a one man show, and even he is not active at this time.

Eran Segev, a member of the NSW Skeptics Committee, was born in Israel, but now barracks for the Australian cricket team.

Letters

Heresy and syntax

John Gibbs
Gold Coast

Whilst agreeing heartily with the main thrust of Helen Lawrence's article (New Guise for an Old Idea; *the Skeptic* 25:4) there are a couple of comments which I would like to make:

Ms Lawrence states that, in 1759, "...Britain was no longer a theocracy where Hume could have been tried for heresy in an ecclesiastical court". In fact, for nearly another century Britons were tried for blasphemy in civil courts! In 1819 Richard Carlisle was imprisoned for six years for blasphemy for having published Thomas Paine's *Age Of Reason* (actually he was sentenced to three years and a fine but he couldn't pay the fine and had to serve another three years in lieu). Approximately 150 other people were jailed for blasphemy for selling the book.

In 1842, George Jacob Holyoake, while lecturing at the Mechanics Institute in London, replied to a questioner "Morality I regard, but I do not believe there is such a thing as God". He was arrested, charged with blasphemy and imprisoned for six months.

Secondly, towards the end of her article, Ms Lawrence states that "...we can't prove that such a being [God] does not exist." as though this lends some credibility to the concept. We can't prove that the universe was not created by the fairies at the bottom of my garden, either, nor that everything in the universe is doubling in size every minute.

Propogators of nonsense — and, unfortunately, some of their critics like Ms Lawrence — derive undue comfort from the fact that their propositions

obey the same syntactical and grammatical rules as meaningful statements. The fact that 'God does not exist' is of the same form as 'The Eiffel Tower is not in Paris' does not bestow significance on the former. It is the prime indicator of hogwash when people make statements, purportedly about the world, which cannot be verified or falsified. Thus "God does not exist", like the statement "The round rectangle was late for lunch' is not true or false; it is meaningless.

Bible does not stack up.

Sten Bjerking
Cranbourne VIC.

Martin Hadley's "A Skeptic's Search fo God" (25:3 aqnd 4) is good reading and most informative. Having read some of the bible myself — for light entertainment — I have been consistently amazed by the inconsistency of this book. I guess that's why theologians devote their whole lives trying to make sense of this nonsense.

Martin points out the discrepancy between the tracing of the genealogy of Jesus by Matthew and Luke. I wonder why this recorded anyway because it is not the genealogy of Jesus but that of Joseph and he was not the father of Jesus — Mary was a virgin remember.

The antics that God gets up to in the Old Testament are most inconsistent and questionable. He is a racist God who shows discrimination by selecting one group as his "chosen people". He is a jealous God that cannot tolerate people worshipping other Gods. He is a vengeful God who punishes directly or

orders his followers to go and slaughter other groups including women, children, and animals because he is offended by them.

These are hardly the acts one would expect from a just and loving God. Why anyone would revere such an entity is beyond my understanding.

If we turn to the first page of *Genesis* we find a small sentence tacked on to the end of verse 16 — something of an afterthought, almost forgotten. This small sentence is one of the most significant in the entire bible. The sentence is — "he made the stars also".

The significance of this small sentence is how small it is — the complete lack of emphasis. These words were written by someone who was ignorant of the immense size of the universe and how small planet Earth is by comparison.

Now it doesn't matter if God made the earth in six 24 hr days or if each day was a million years. Its the lack of proportion of the time spent making the stars as compared to this tiny planet that is way out.

One would think that if God inspired the writing of this book he would have given some clue to indicate the scale of everything. This may have puzzled readers a couple of thousand years ago but it would have impressed us today.

Early colonial AltMed

Bill Dower
Chudleigh TAS

It appears that bovine manure has been the basis for much alternative medicine for quite a long time.

Extract from the "Sydney Gazette" Sunday December 18th 1803

"Sir,

Through the channel of your useful publication, I wish to recommend an easy, cheap and effective though vulgar application in all cases of violent burns or scalds, instances of the fatality of which have too frequently appeared
.....Take any quantity of fresh cow dung, and with warm water bring it to the consistency of a soft poultice; if the injury be extensive or has penetrated deeply and thereby destroyed much of the soft parts, let slips of lint or soft linen be moistened with cold drawn linseed or sweet oil, hog's lard or fresh butter ; apply this to the effected part and cover the dressing with the above poultice as warm as new milk, in such quantity as to remain warm and moisture. When the parts become painful repeat the application as often as occasion may require From accidents by fire, boiling water, wort and hydrogen gas ; and it is the application I would use upon myself, or in the family of my friend.

I am & C
A Milkmaid"

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