

Australian Paradox 101

DRAFT: A disturbing episode involving the University of Sydney's deeply flawed obesity study, academic negligence, a serious but undisclosed conflict of interest and possible scientific misconduct

Welcome to the PowerPoint version of this dispute. For those new to the discussion, I'm arguing near and far for the deeply flawed *Australia Paradox* paper's correction or retraction, based on the facts comprehensively documented in the following slides. Why not try to prove that I'm wrong? Try my **\$40,000 Australian Paradox Challenge**! If you do nothing else, please consider Slides 8-10, 12-19 and 38-42. And please contact me if you notice any errors of fact, so I can correct them immediately. (Yes, the formatting needs to be improved and there are way too many words!) If you are keen, I'm happy for this presentation to be forwarded to family, friends, acquaintances, actually anyone interested in nutrition and/or involved in academia, science, medicine, public health or public policy more generally.

Draft (October 2012): Comments, corrections, complaints, and even compliments - all are welcome.

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Summary: Why the *Australian Paradox* paper matters

- The University of Sydney's *Australian Paradox* paper concludes that sugar consumption by Australians has declined substantially "over the past 30 years", so there is "an inverse relationship" between sugar intake and obesity! So suck down the sweet stuff! Unfortunately, the paper is deeply flawed, via a series of serious errors that reverse its main conclusions. **Start with Slides 8-10.**
- In particular, the underlying dataset for the authors' preferred series was **discontinued as unreliable** by the ABS after 1998-99, more than a decade before the paper was published! And while the valid data in four of the authors' own big-picture sugar charts say "**up**", the authors conclude "**down**"! The authors' published rebuttal of my critique – *Australian Paradox Revisited* - also contains errors, but mainly it's just fluffy and does not address those specific dominating problems in the original paper.
- The University of Sydney authors' eye-popping initial false made-up claim in response to my critique - that **cars not humans** were eating a big chunk of the available sugar via ethanol production, despite the process in Australia not involving sugar! - provides unmistakable confirmation that their study is lightweight and sloppy with key facts, and their conclusion spectacularly wrong. Journalist Michael Pascoe has documented some rather unscholarly behaviour by the authors in the rebuttal process. How does **the level of competence and scholarship** revealed in this episode meet any standard to which a serious University aspires?
- In my opinion, the *Australian Paradox* paper is **an academic disgrace that should be corrected or retracted, to rescue the University of Sydney's reputation for competent academic and scientific research**. On how this negligent paper was published in the first place, it seems significant that the lead author also oversaw the journal's quality-control processes as "**Guest Editor**"!
- Moreover, the University of Sydney's woeful paper should be corrected or retracted because its obviously false conclusion – "an inverse relationship" between added-sugar consumption and obesity - has become **a menace to Australian public health**. Disturbingly, the Heart Foundation, Diabetes Australia, Nutrition Australia and the Dietitians Association of Australia all have drawn false comfort from that mistaken claim and subsequently misinformed countless Australians seeking reliable nutrition advice.
- **In particular, that spectacularly false conclusion has provided the intellectual basis for both the Heart Foundation and the University of Sydney's Glycemic Index Foundation to strongly endorse manufactured foods high in added-sugar as healthy - via trusted Ticks and stamps - despite increasingly clear evidence that added sugar is a serious health hazard.**
- The problem is that once-scarce "**fructose**" - one-half of refined sugar or "sucrose" - is viewed by a growing nucleus of global scientists as dangerous – driving obesity, diabetes and related maladies - when modern doses are consumed decade after decade, as they are: <http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all>
- **I've done my best to document the key facts in this dispute and to explain why it all matters. From here, if University of Sydney Vice-Chancellor Dr Michael Spence – who rather unwisely vouched for the veracity of his scientists' deeply flawed paper - proves to be unwilling to fix this mess, I'll be urging a cut in public research subsidies for the University of Sydney and a public investigation into this *Australian Paradox* fiasco.**

\$40,000 Australian Paradox Challenge in “Campus Review”

www.campusreview.com.au , 21 August 2011

News 05

The great sugar debate

Remember economist Rory Robertson who bet Doomsday forecaster Steve Keen a walk to Mt Kosciuszko over house prices not crashing during the GFC?

Well he's at it again and this time he's taking on University of Sydney nutritionists Jennie Brand-Miller and Alan Barclay over their study findings suggesting there is “an inverse relationship” between sugar consumption and obesity.

The Australian Paradox study by Professor Brand-Miller, author of *The Low GI Diet* book, and Dr Barclay, the Australian Diabetes Council's head of research, claimed that Australia's sugar consumption had fallen by 23 per cent over the past three decades while obesity has soared.

While this may come as a happy surprise to some, Robertson is not so joyous. He says the “shonky sugar study”, is a combination of unreliable facts and misinterpretation of statistics and data which have led the nutritionists to publishing, what he says is a “flawed” paper.

The nutritionists have been locked in a heated debate with the economist. But in a bid to end the fight, Robertson said he would give \$40,000 to anyone who is able to dispute his claims. On his

website, he has described *The Australian Paradox*, published in the e-journal *Nutrients*, as “sloppy data analysis”. Apart from misinterpreting that statistics, Robertson accuses the pair of using UN Food and Agriculture Organisation statistics taken from information from an Australian Bureau of Statistics survey that had been discontinued several years ago.

Robertson is arguing for “the papers correction or retraction by its author, the journal and or the University of Sydney”. However, his requests don't seem to be so straightforward, as Brand-Miller and Barclay blame Robertson for factual errors and “misinterpretation of the distinctions between total sugars versus refined sugars, sugar availability versus apparent consumption, sugar-sweetened and diet soft drinks, and other nutrition information.”

They say he incorrectly equates sugar availability with sugar consumption. In the *Australia Paradox Revisited* paper the pair say sugar availability is not the same as consumption as it doesn't take into account food wastage, use in animal food, beer and alcohol fermentation and in non-food industrial use. The academics substantiate their original paper saying it is supported by three independent sources. There is no word yet on anyone winning the money. ■

Try my \$40,000 Australian Paradox Challenge at

<http://www.australianparadox.com/pdf/SydneyUniVC%20LETTER070612.pdf>

Australian Paradox 101

The paper in dispute: *The Australian Paradox: A Substantial Decline in Sugars Intake over the Same Timeframe that Overweight and Obesity Have Increased* If you do nothing else, please consider Slides 8-10, 12-19 and 38-42.

Authors: **Dr Alan W. Barclay and Professor Jennie Brand-Miller** “This study was a Masters of Nutrition and Dietetic project conducted by Laura Owens and co-supervised by AWB and JBM”. AWB is “Chief Scientific Officer” at the Glycemic Index Foundation Limited (GIF), the University of Sydney’s “not-for-profit GI-based food endorsement program in Australia” and “Head of Research at the Australian Diabetes Council”. JBM “holds a Personal Chair in Human Nutrition” at the University of Sydney, is a Director of GIF, and manages the University’s “GI testing service” (<http://www.glycemicindex.com/>). Notably, the University of Sydney scientists are Australia’s leading advocates of the “low GI” approach to nutrition, the prosperity of which depends on added sugar not being perceived as a health hazard. Awkwardly, the authors appear to be Australia’s highest-profile academic defenders of added sugar in foods as harmless, while some companies paying the GIF to use its **lowGI** stamp are big sellers of sugar or sugary products. Beyond the undisclosed conflict of interest, the problem is that half of added sugar is **fructose, which has a super-low GI of 19** and increasingly is viewed as a serious health hazard.

Journal: **Nutrients** A pay-for-publication E-journal. JBM also was “Guest Editor” of the relevant April 2011 “Special Issue”.

This presentation documents a still-unfolding case study involving the extraordinary publication of factually incorrect conclusions in a “peer reviewed” scientific journal – twice! - and unreasonable scholarship by University of Sydney scientists, as well as a disturbing lack of accountability from the journal and the University. Notably, University of Sydney Vice-Chancellor Dr Michael Spence - on the basis of poor advice from an unidentified adviser - has unwisely vouched for the veracity of the deeply flawed *Australian Paradox* paper. The problem is that the paper’s key conclusion is factually incorrect, yet at the same time it provides important support - at a time of growing stress - to the University of Sydney’s GI enterprise. When will the authors, the journal, Dr Spence and/or the University of Sydney correct this misinformation?

Warning: The academic part of this dispute is not complicated. It’s not about science or nutrition but is **purely an empirical matter**. It’s about simple facts: who is right and who is wrong depends simply on whether four valid indicators of sugar consumption trend up or down. (Yes, they trend up.) And whether or not the critical ABS dataset that provides the basis of the authors’ preferred FAO sugar series – the only one that points down - was discontinued as unreliable by the ABS after 1998-99, over a decade ago. (Yes, it was.) Read on and please tell me how the level of competence and scholarship revealed by the authors in this episode meets any standard to which a serious University aspires?

More background on *Australian Paradox 101*

- My name is Rory Robertson. I'm an economist, trained at James Cook University (BEC, First Class Honours, 1987), the Australian National University (Master of Economics, 1991) and the Reserve Bank of Australia (1988-1994).
- I stumbled into this dispute after reading something in the press last July that struck me as both strange and factually incorrect (next slide). Before then, I would barely have imagined questioning the work of any distinguished scientist. In my quarter-century as a professional economist analysing data and charts, however, I have assessed many thousands of charts and I know negligent analysis when I see it. (Check out Slides 8-10, 12-19 and 38-42.)
- **In my opinion, the problems with the University of Sydney's *Australian Paradox* paper are so basic and obvious that any competent observer after having assessed the core facts will struggle not to come to the view that the paper needs to be corrected or retracted.**
- After all, while the University of Sydney scientists in April 2011 claimed a peer-reviewed scientific observation - "**an inverse relationship**" between added-sugar consumption (**down**) and obesity (up), the Australian Paradox! - the valid sugar indicators in the authors' own charts trend **up** not down, while the basis of their preferred series was discontinued as unreliable after 1998-99, more than a decade ago!
- Despite the credibility of the University of Sydney's *Australian Paradox* paper having been shredded by basic scrutiny and simple facts, the authors in March/April 2012 rushed to produce two unconvincing rebuttals – the second one published as ***Australian Paradox Revisited*** - while the Editor-in-Chief of the journal published an ***Editorial*** bemoaning my efforts to encourage competent quality control at his little-respected pay-for-publication operation.
- Newcomers to this dispute rightly will be sceptical that the work of high-profile University of Sydney scientists could be as woeful as I am saying. Yet I'm hoping that - after seeing the simple facts of this matter - you'll join me in arguing for the correction or retraction of University of Sydney's woeful *Australian Paradox* paper. (The issues are discussed in great detail at <https://theconversation.edu.au/what-role-does-fructose-have-in-weight-gain-7424#comments>)
- **To the extent that the paper is not corrected, I'll be arguing that public research subsidies paid to the University of Sydney should be reduced substantially.** After all, taxpayers are unlikely to be keen to continue to subsidise a University that publishes, republishes and then refuses to correct factually incorrect conclusions that survive - attached to the prestigious University's badge of credibility – to become a menace to their own health and that of their children (see slide 46 and #6 at <http://www.australianparadox.com/>)

"A spoonful of sugar is not so bad"

by Leigh Dayton, Science writer ; [The Australian](#) ; July 10, 2011



BILL Shrapnel was not amused. He'd logged on to the National Health and Medical Research Council's website a few weeks ago and read the draft dietary guideline recommendations. "My reaction was that the NHMRC is supposed to be the bastion of evidence-based nutrition," recalls Shrapnel, **consultant dietitian and deputy chairman of the University of Sydney Nutrition Research Foundation.** "But their dietary work is still laced with the dogma that diminishes our profession."

What raised Shrapnel's ire was the word sugars in recommendation No 3: "Limit intake of foods and drinks containing saturated and trans fats; added salt; added sugars; and alcohol". **Limit sugars? "Show us the evidence," he says. "There isn't any."**

Along with University of Sydney nutritionist Jennie Brand-Miller, Shrapnel takes the highly contentious position that sugar isn't a dietary evil, as dangerous to human health as saturated and trans fats, salt and alcohol.

As Shrapnel says, "Low sugar is not necessarily good and high sugar is not necessarily bad because sugar isn't the main game." Brand-Miller adds that **"highlighting sugar only distracts people from the more important issues"** such as high levels of consumption of recommendation No 3's fats, salt and alcohol.

Worse, both argue health policy - from public dietary advice to food regulation and marketing and industry standards - is not based on science but on myth. ...She argues there's growing evidence that - unlike saturated and trans fats, salt and alcohol - eating added sugar is not inherently dangerous.

"It doesn't actually do any direct harm to the human body. It doesn't raise blood cholesterol or raise blood pressure or cause cancer," says Brand-Miller. "Australians have been eating less and less sugar, and rates of obesity have been increasing," she says... (My emphasis)

Australian Paradox, as published

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Article

The Australian Paradox: A Substantial Decline in Sugars Intake over the Same Timeframe that Overweight and Obesity Have Increased

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<http://www.mdpi.com/2072-6643/3/4/491/htm>

False scientific conclusions, twice verified!

*This analysis of [i] apparent consumption, [ii] national dietary surveys and [iii] food industry data indicates a consistent and **substantial decline** in total refined or added sugar consumption by Australians **over the past 30 years**.* [Again, as we'll see, the underlying dataset for [i] was discontinued as unreliable by the ABS after 1998-99, more than a decade before *Australian Paradox* was published; the key charts for [ii] trend up not down; and the University of Sydney scientists' false interpretation of [iii] in my opinion is an academic disgrace (next slide).]

*The present analysis indicates the existence of an Australian Paradox, i.e., **an inverse relationship** between secular trends in the **prevalence of obesity prevalence** (increasing by **~300%**) and the consumption of refined sugar over the same time frame (declining by **~20%**).* [Sorry, there's no inverse relationship, as Figures 1-4 suggest strongly that sugar consumption has increased rather than declined. By the way, the authors mean "**3 fold**" (as they wrote in their abstract) or 200% - **not 300%**. (Where are the fact-checkers?) Could they also ditch that superfluous "prevalence"?]

*The findings confirm an "**Australian Paradox**" - a substantial decline in refined sugars intake over the same timeframe that obesity has increased.* [I assume the authors mean either "sugar" **or** "sugars" in all of these quotes and in their extended title. It is a distinction that matters. Anyway, the conclusion is not a paradox, not even a puzzle. No, it's just wrong: a series of serious – dominating - errors published in a tin-pot E-journal with no credible quality control.]

My numbering and emphasis; <http://www.mdpi.com/2072-6643/3/4/491/htm>

Competent peer review and editorial oversight would have fixed the authors' many little careless errors, including the misspelling of "Roberston" on page 3 in *Australian Paradox Revisited*. More importantly, **a real journal with real quality control** would not have published *Australian Paradox* at all, would not have tolerated the series of serious errors that dominate the paper and invalidate its conclusions. Readers, the authors' eye-popping false made-up claim in response to my critique - that **cars not humans** were eating a chunk of the available sugar via ethanol production! - is unmistakable confirmation that the University of Sydney's study is lightweight and sloppy with important facts, and its conclusion just wrong. Disturbingly, one of the authors also wore the hat of "Guest Editor" of the relevant "Special Issue" of *Nutrients*. How is that consistent with credible quality control? In any case, it's clear that credible quality control was lacking in this episode (next slide).

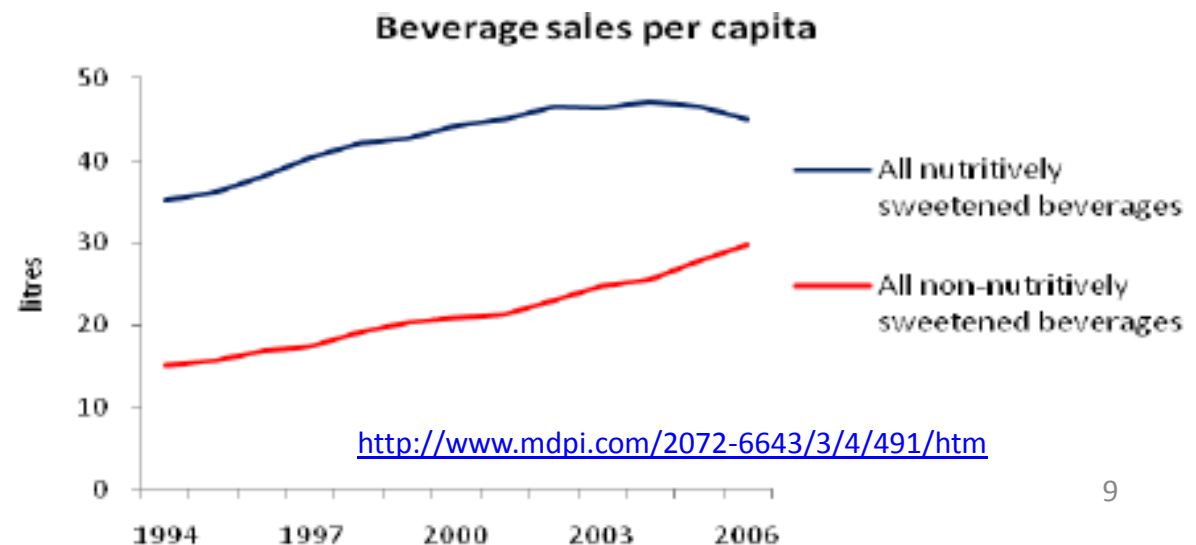
How's this for incompetence in *Nutrients'* quality control?

So, the top (dark) line in the University of Sydney scientists' Figure 5A below shows **per-capita sales of sugary softdrinks**. Yes, it shows a 30% increase between 1994 and 2006. Yes, it suggests, if anything, that sugar consumption rose rather than fell. Yes, the bottom (red) line - sales of diet drinks, other non-sugary drinks and bottled water – is irrelevant, a furphy, since the only relevant issue is the consumption of refined sugar. **Bizarrely, the authors interpret this chart as evidence for - not against! - their claimed “substantial decline” in per-capita sugar consumption since 1980:**

Our findings suggest that Australians have taken seriously public health recommendations to decrease sugars, particularly sugar-sweetened beverages. [Nope] Food industry data indicate that per capita sales of low calorie (non-nutritively sweetened) beverages doubled from 1994 to 2006 [correct] while nutritively sweetened beverages decreased by 10% [huh?] (My **bolding**; 3rd paragraph in “4. Discussion” at <http://www.mdpi.com/2072-6643/3/4/491/htm>)

Looking at the chart, it is clear that “**decreased by 10%**” should read “**increased by 30%**” (from 35 to 45ish)! Yet that factually incorrect sentence was “peer reviewed” and published as correct – twice! **Please, let's have no more pretending that there are no serious errors in Australian Paradox.** Indeed, put up your hand if you think there was any serious quality control at *Nutrients'* Basic errors, charts of valid sugar indicators pointing up not down, silly arguments involving diet drinks and bottled water, and datasets that are years out of date. And how about the preferred FAO series based on an ABS dataset abandoned more than a decade ago as unreliable? **In the next slide (overleaf), notice the strangely flat readings for the green line after 1998-99!**

Figure 5A:



Authors' preferred sugar series - green line – “exists” in 2003 despite underlying dataset discontinued as unreliable by ABS after 1998-99!??



1997-98 AND 1998-99

4306.0

APPARENT CONSUMPTION OF FOODSTUFFS

AUSTRALIA

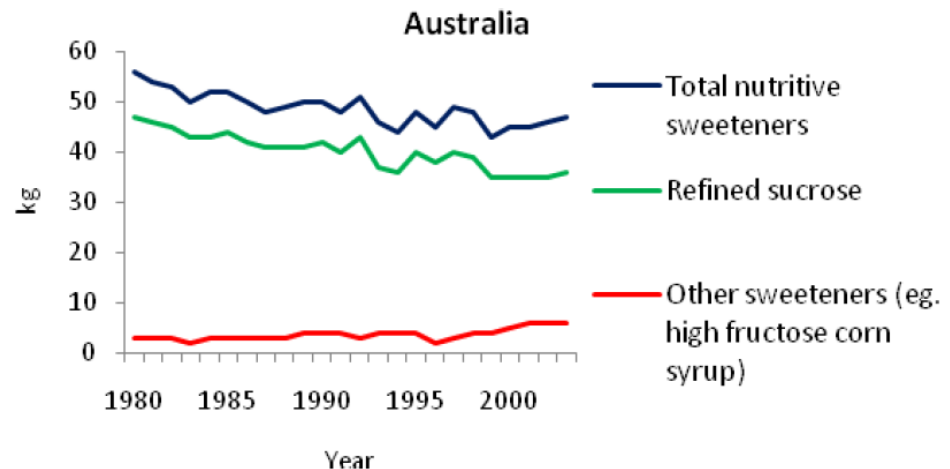
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CONTENTS

	page
Notes.....	2
Summary of findings	3

TABLES

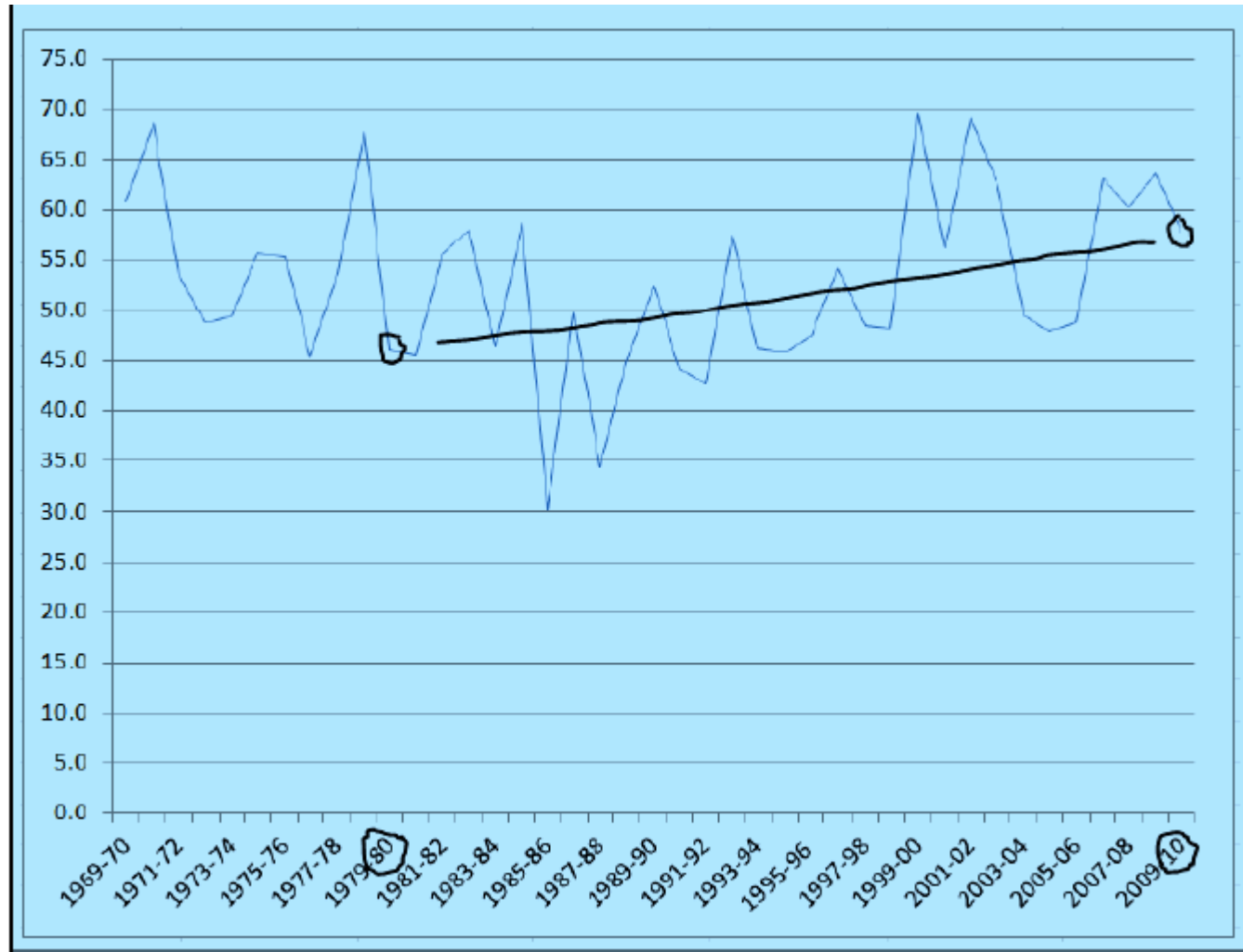
1 Apparent per capita consumption—average 3 years ended 1938-39 to 1988-89, and 1998-99	10
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The problems with *Australian Paradox*, in brief

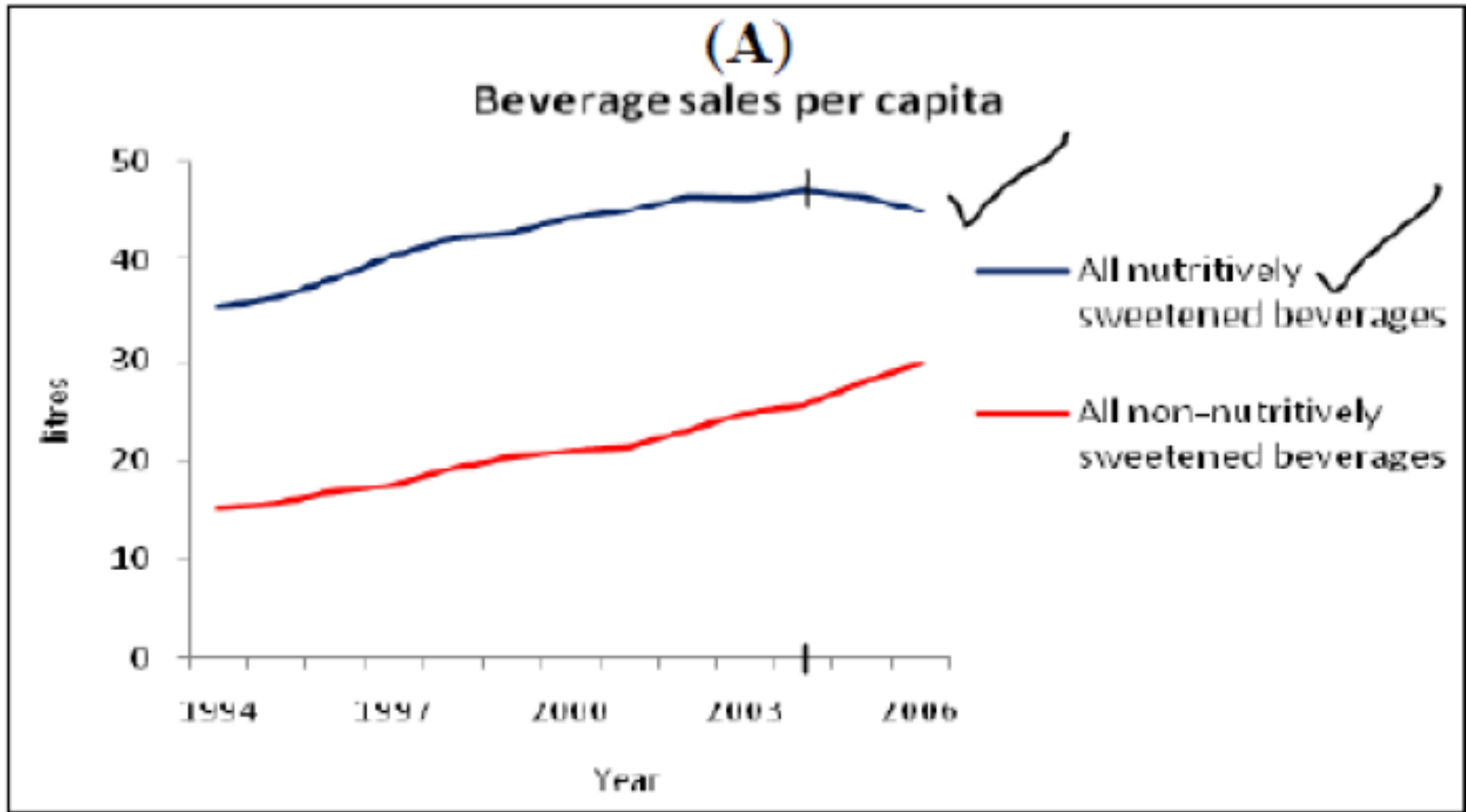
- The basic problem is that **four out of four valid big-picture indicators of sugar consumption trend up not down**, in the authors' own published charts! That the trend in sugar consumption is **not** down is the clear message from the upward trends in Figures 1-4 (just ahead). Yes, it is rather bizarre to find professional scientists going out of their way to choose a conclusion that clearly is contradicted by the available information **sitting there unacknowledged in their own charts!**
- For those unconvinced that the problem could be that basic, **Dr Rosemary Stanton** has confirmed publicly that the *Australian Paradox* paper is "silly" because there is "no evidence" that sugar consumption declined over the 30 years to 2010 (see Slide 23). And then there's that abandoned dataset!
- Extraordinarily, the dataset on which the authors' preferred Food and Agricultural Organisation (FAO) "Apparent consumption of sugar" series is based was **discontinued as unreliable** by the ABS after 1998-99, more than a decade before the paper was published. Yes, bizarrely, the authors were blissfully unaware – or simply chose not to mention – that the dataset underlying their preferred series had been abandoned by the ABS! So the authors' unreliable preferred series doesn't span even two-thirds of the claimed 30 years before it is officially discontinued by the ABS. But each of the authors' four valid datasets - in their own charts reproduced in the next four slides - show an upward trend. Case closed.
- **In their initial rebuttal of my critique, the authors' main specific response was to argue that cars not humans have been consuming a big chunk – up to 14kg p.a. per person - of the available sugar via fast-growing ethanol production.** Sorry, but sugar is not used in ethanol production in Australia (see Slide 39). Bad guess! Wrong again. Instead of conceding the point, however, our unreliable scientists chose to proceed via **an unscholarly unacknowledged delete**. Highly respected journalist **Michael Pascoe** recently skewered the scientists by documenting the role of their slippery disappearing false made-up excuse on the way to an utterly unconvincing published rebuttal that failed to address the dominating errors outlined above (Slide 40). **Please tell me - based on your assessment of the well-documented facts of this matter - why this whole episode isn't well described as simple incompetence morphing into scholarly/scientific misconduct?**
- It was in response to **the authors' unreasonable and unscholarly behaviour** – as documented by Michael Pascoe - that I began using words like incompetence, shonky, retraction and misconduct. **Retractions of dud papers are on the rise globally, and there is plenty of room for one more!** (See <http://www.nature.com/news/2011/111005/full/478026a.html> ; <http://www.nytimes.com/2012/04/17/science/rise-in-scientific-journal-retractions-prompts-calls-for-reform.html?pagewanted=all> ; <http://www.allgov.com/news/controversies/retraction-crisis-hits-scientific-journals?news=844345> ; and <http://blogs.nature.com/news/2012/08/ori-former-harvard-postdoc-guilty-of-misconduct.html>)

Figure 1: Sugar availability (kg p.p. p.a.)



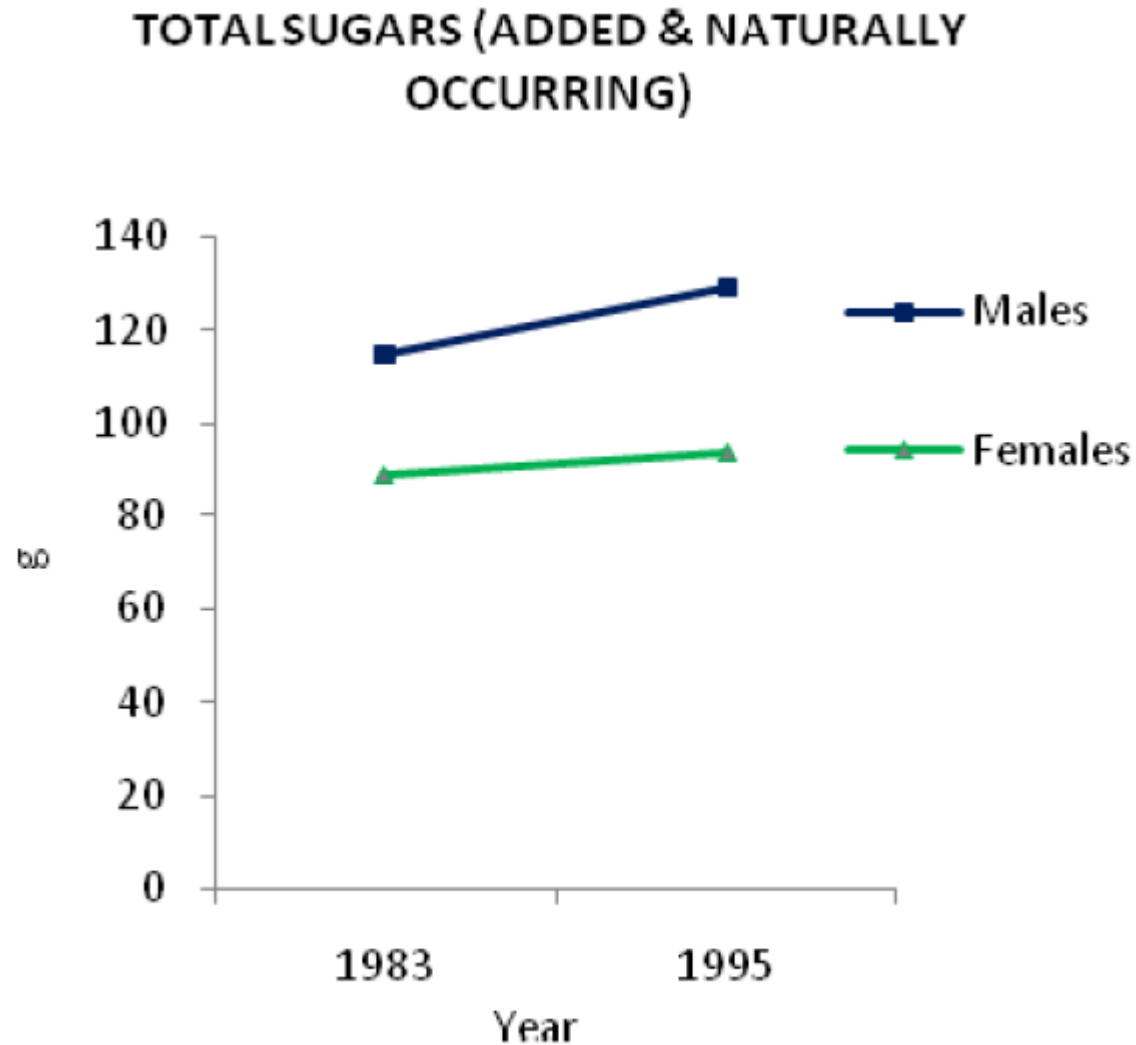
Source: *Australian Paradox Revisited* ; My "trend" for "the past 30 years"

**Figure 2: Sugary softdrink sales
(litres p.p. p.a.)**



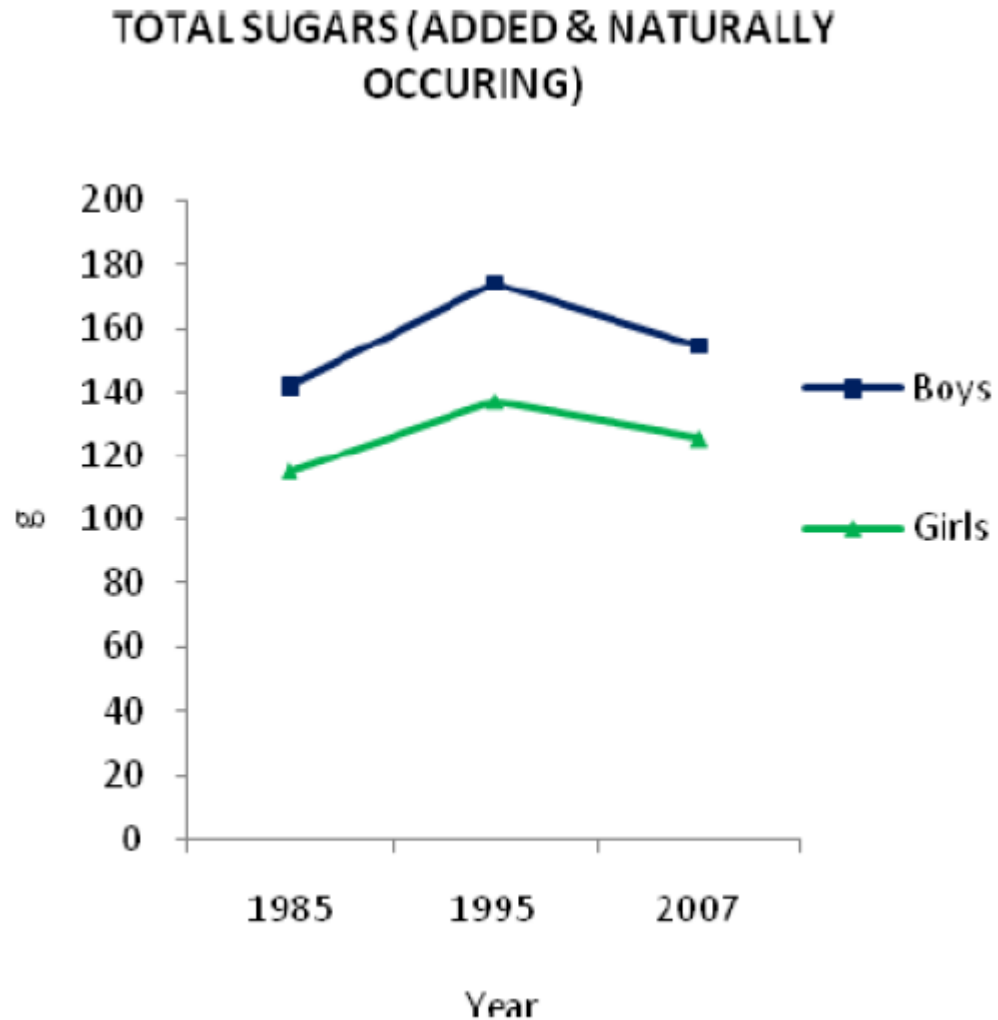
Source: *Australian Paradox* ; My mark for 2004 (not 2003) “peak” in sugary softdrinks

Figure 3: National surveys - Adults



Source: *Australian Paradox*

Figure 4: National surveys - Children



Source: *Australian Paradox*

So what are we to make of these four charts?

- Four valid indicators of sugar consumption - all trending up! That rather contradicts the always-unlikely claim that consumption declined substantially between 1980 and 2010. Indeed, it's hard to avoid the conclusion that consumption of (added) sugar has tended to increase. (I go into great detail about each chart at <http://www.australianparadox.com/pdf/TimeforNeweditor24052012.pdf>)
- **So, the so-called “Australian Paradox” is not even a puzzle - it's just plain wrong**, because sugar consumption and obesity seem to have moved in the same direction. The authors' eye-popping initial false made-up claim in response to my critique - that **cars not humans** were eating a big chunk of the available sugar via ethanol production! - provides unmistakable confirmation that their study is lightweight and sloppy with important facts, and their conclusion spectacularly wrong.
- Indeed, **the only real paradox** with *Australian Paradox* is why what the University of Sydney scientists are saying – the available data show "a consistent and substantial decline in total refined or added-sugar consumption by Australians over the past 30 years" - is exactly the opposite of what their own valid charts seem to be saying - the trend looks to be up - and why clownish quality control at *Nutrients* twice has allowed publication of the authors' negligent analysis and their always unlikely conclusion.
- **All in all, we are left with a clear sense that there is no “Australian Paradox”, just an idiosyncratic and unreasonable assessment – and avoidance - of the available sugar data by those who coined the phrase.**
- The evidence published in the authors' own valid charts **completely contradicts their long-time pre-publication pet conclusion** of a substantial decline in (added) sugar consumption. **Is this an example of simple negligence or what?** (<http://www.smh.com.au/lifestyle/diet-and-fitness/how-hard-can-it-be-to-cut-sugar-20100630-zmvt.html>)

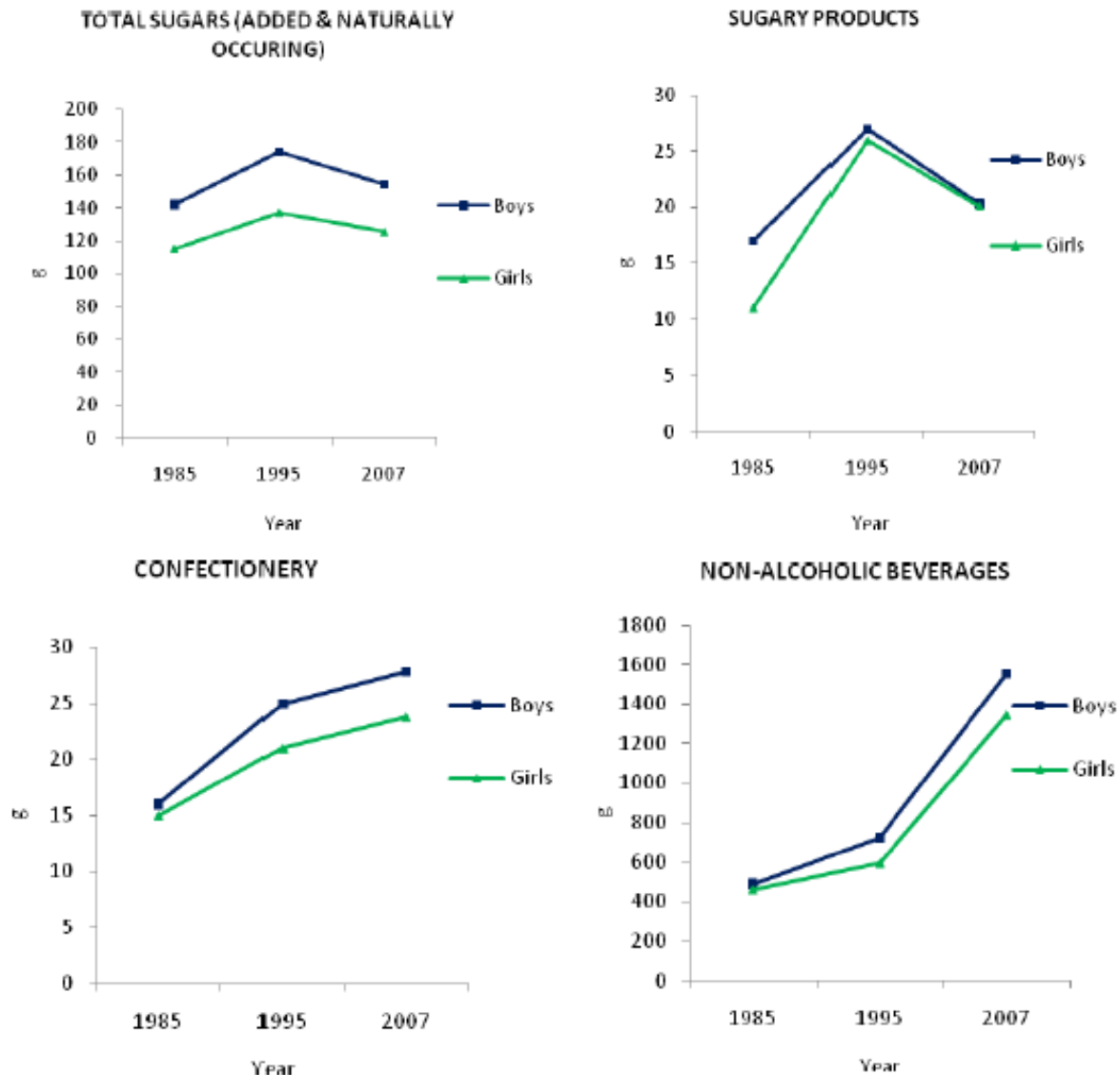
Underperforming authors conceding nothing, not even the obvious

With **three "independent lines of evidence"** (in Figures 1-4 on the previous slides)all contradicting their long-time pet story, the University of Sydney authors of the “shonky sugar study” needed to identify three “special factors” to explain why the valid big-picture indicators of sugar consumption in four of their charts point up not down. They claimed:

- In **Figure 1**, **motor vehicles not humans consumed a big chunk of the available sugar!** Of course, our cars did nothing of the sort, leaving apparent consumption likely to follow the upward trend in sugar availability. (The authors’ rather unscholarly rebuttal efforts are documented in Slides 38-42.)
- In **Figure 2 (a.k.a. Figure 5A)**, the **faster growth in diet drinks and non-sugary bottled water somehow offsets a 30% rise in sugary softdrinks**. It doesn't. Indeed, the relevant issue is sugar consumption – not non-sugar consumption - so the University of Sydney scientists’ diet-drink observation is a **complete furphy**. Remarkably, at one time they seemed to be genuinely unaware of that fact.
- In **Figure 3 (Adults) and Figure 4 (Children)**, the **consumption of intrinsic/natural sugars increased while that of refined sugars declined**. The authors produced no convincing evidence that unprocessed sugars were the driving force (there is none), made further serious errors while fashioning their preferred story, and tended to stretch the data beyond what is reasonable.
- **Importantly, the story for children in Figure 4 and Figure 4a (next slide) is unambiguous**. That is, the longer-term trend over the two decades spanned by the separately sourced (and so not strictly comparable) point-in-time estimates for 1985 and 2007 is **up not down** not only for “**Total sugars**”, but also for “**Sugary products**”, “**Confectionery**” and “**Non-alcoholic beverages**” in the authors’ own charts, as well as for another large sugary category “**Cereal-based products and dishes**” in the original data.

Again, what Australian Paradox? These various observations are discussed in exhaustive – and exhausting - detail in the vicinity of Figures 1-4 at <http://www.australianparadox.com/>

Figure 4a: National surveys - Children



* Including coffee, tea and low joule soft drinks.

Source: Australian Paradox

So why the silly “Australian Paradox” story?

Well, it started with a careless error. Yes, Dr Barclay and Professor Brand-Miller haplessly downloaded their preferred series - “Apparent consumption of sugar” – from www.fao.org, the United Nations’ data collator. **Too bad they did not look at the obvious dataset closer to home.** Unfortunately for them, the critical ABS dataset (4306.0) - which for decades provided the basis for their FAO series, and which now provides the invalid basis for their *Australian Paradox*’s “paradox” - was **discontinued as unreliable** by the ABS after 1998-99, more than a decade before the sloppy paper’s publication. Again, Slide 10 shows the cover page of the dataset’s dead-end.

The ABS series was discontinued as unreliable after 1998-99, yet bizarrely the authors have published charts out to 2003! That – by itself – merits a correction if not the retraction of *Australian Paradox*. The problem was the ABS’s growing and unavoidable inability to measure sugar imports. Simply, the added-sugar increasingly mixed – in varied amounts - into rapidly growing volumes - and varieties - of manufactured food and drink imports increasingly eluded the hard-working humans whose job was trying to count all the refined sugar in our food supply.

And the problems with the reliability of the authors’ preferred series go back much further. After all, it was not an overnight decision by the ABS to abandon an important dataset **after 60 years**. Extraordinarily, the authors recent public statements on this topic suggest that even today they remain oblivious to the fact that **Canberra still publishes easier-to-measure apparent consumption data for beef, mutton, pork, poultry, rice, milk, butter, cheese, wine and beer, even after long ago abandoning any effort to count extremely hard-to-measure refined sugar.**

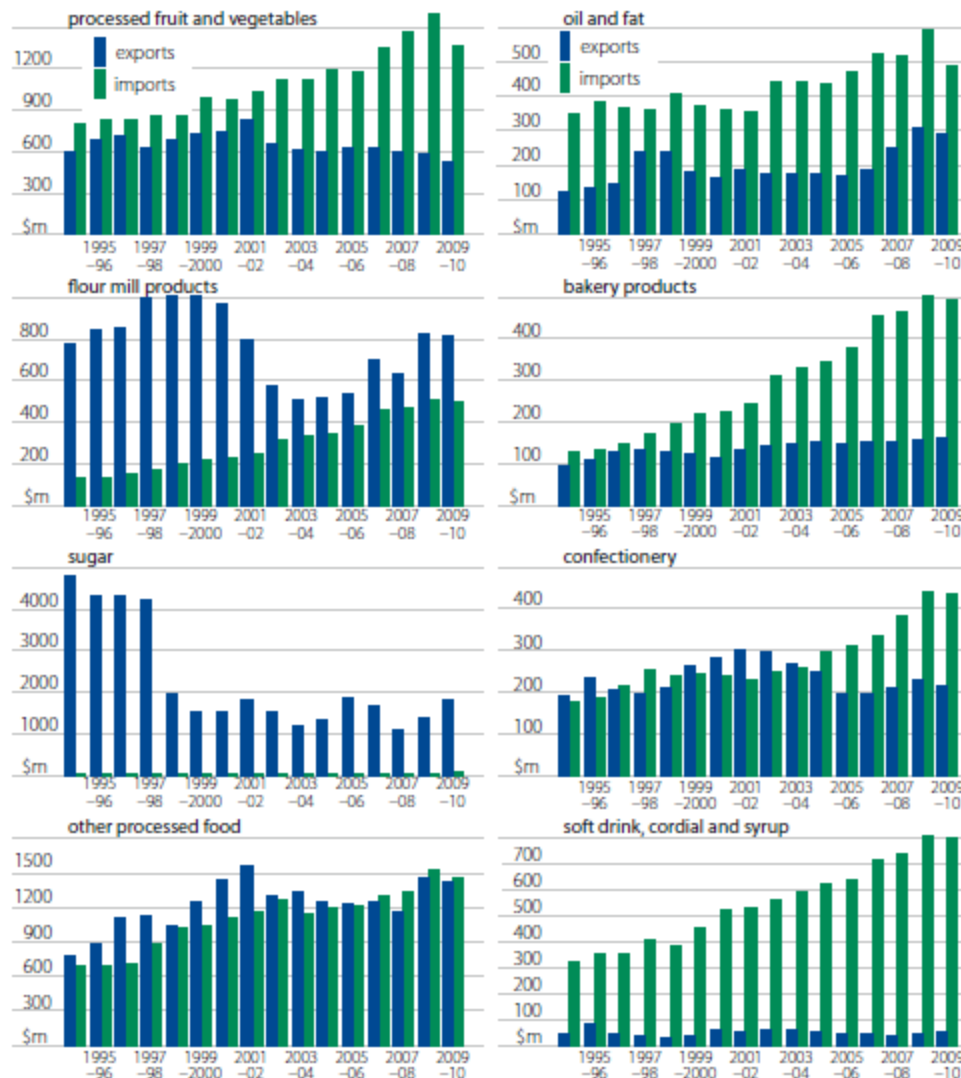
Apparent consumption ~ domestic production – exports + imports – “leakages”. Clearly, without estimates for imports, a valid series for apparent consumption cannot exist. **So with the ABS since 1998-99 not even pretending to count sugar imports, there can be no valid data for Australia “over the past 30 years”. Full stop!** Again, the ABS did not stop counting sugar because it couldn’t find any! For decades it had struggled to know how much sugar was contained in **rapidly expanding varieties of sugar-laden imports** of bakery products, confectionary, soft-drinks, cordial and syrup, processed fruit and vegetables, and “other processed foods” (see next slide). After a detailed feasibility study, a reliable count was assessed as impossible - given ABS resources - because increasingly the sugar arrived already mixed into tens of thousands of food/drink imports. To confirm all that, an **experienced ABS officer** is available on 02 6252 5337, as documented on that final data release.

While not a paradox, it is rather a puzzle how professional scientists managed remain unaware of - or simply chose not to mention - this data dead-end - the fact that the ABS simply stopped producing data on the apparent consumption of sugar. Awkwardly, none of this was a secret, and the equation above is not complicated. Yes, indeed, the authors should have taken the time to understand the abandoned dataset on which they based their invalid scientific claim of “an inverse relationship” between sugar consumption and obesity. But alas, they and their journal seem to be in denial and have chosen – unreasonably – to continue to ignore the data-dead-end I’ve highlighted now for six months!

Like *Australian Paradox Revisited*, the authors’ new website - <http://www.theaustralianparadox.com.au/ABARE.php> - fails to address the specific problems in the original paper. **Even today, the authors present themselves as oblivious to the relevance of the discontinued critical dataset.** And to the fact that the clear uptrend in “sugar availability” between 1980 and 2010 does **not** include imports. **Yes, the uptrends in sugar availability and sugary imports (next slide) make a mockery of the silly story of declining sugar consumption.** Readers, imagine your credibility with friends if you tried to argue again and again that there’s been a **“substantial decline” in the apparent consumption of cars (or sugar)** while pointing to local production less exports yet not noticing - let alone acknowledging - all the imported Toyotas (and Toblerones)!

Authors oblivious to rising volumes of sugary imports

11 Australian food exports and imports, by sector *continued*
in 2009-10 dollars



"Economist v nutritionists: big sugar and low-GI brigade lose"

www.smh.com.au, 7 March 2012, by Michael Pascoe

Moneyball, the successful book and movie, showed how an economist's feeling for statistics turned a professional baseball upside down. Now an Australian economist's examination of the numbers destroys the local sugar lobby's key defence against linking fructose to obesity and diabetes.

The sugar industry is a big fan of what self-described "economist and former fattie", Rory Robertson, calls "the low-GI crew" – a high profile group of Sydney University nutritionists who promote the health benefits of food with a low glycemic index and downplay, if not completely dismiss, claims that fructose is a prime suspect in our obesity and diabetes epidemics.

The low-GI crew is about as high profile as academic nutritionists can get: Professor Jennie Brand-Miller, AM, author of the Low GI Diet book; Bill Shrapnel, Sydney University Nutrition Research Foundation deputy chairman; and Dr Alan Barclay, the Australian Diabetes Council's head of research.

The cornerstone of their defence of sugar is what they have termed "the Australian Paradox" – the claim that Australians' sugar consumption has fallen by 23 per cent over the past 30 years while obesity and diabetes has soared. Thus, they argue, sugar must be innocent.

There are others who claim sugar is guilty as hell, with none arguing the case against sugar most [more?] forcefully than David Gillespie, lawyer and author of three Sweet Poison books. Faced with Gillespie's theories, Professor Brand-Miller cites the Australian Paradox. "That to me blows David Gillespie's hypothesis out of the window [sic]," she says. Want a quote attacking those who attack sugar, ring the low-GI crew and you'll get the Australian Paradox.

But what if there is no Australian Paradox? What if Australians' sugar consumption has been rising and the low-GI crew's key statistic is simply wrong? Enter Rory Robertson, unaware there was an academic debate raging when he came across Gillespie's book, cut fructose from his diet last May and lost 10 kg without any extra exercise. As a believer then through personal experience, he subsequently found the Australian Paradox more than a little strange, applied his economist's training to dig into the source of the nutritionists' statistic and now charges that it is not true.

Taking aim

...Robertson takes issue with several aspects of the low-GI crew's defence of sugar:

"My main concern, however, is the low-GI crew's unreasonable treatment of the available data on Australian sugar consumption. Its regular claim - "In Australia sugar consumption has dropped 23 per cent since 1980" - is woefully misleading, based as it is on a series that was abandoned by the Australian Bureau of Statistics (ABS) as unreliable a decade ago.

"Last year, Dr Alan Barclay and Professor Jennie Brand-Miller lifted the status of the "it's not sugar" story a couple of notches, publishing an academic paper that concluded: "This analysis of [i] apparent consumption, [ii] national dietary surveys and [iii] food industry data indicates a consistent and substantial decline in total refined or added sugar consumption by Australians over the past 30 years".

"The low-GI crew then declared an 'Australian Paradox' in the relationship between sugar consumption (down) and obesity (up). Unfortunately, the paper's conclusion is largely at odds with the available facts on Australian per capita sugar consumption.

"Bizarrely, the low-GI crew seems somewhat unaware that its own charts illustrate clearly that the longer-term trend in measures [(ii) and (iii)] is up not down... the available national nutrition surveys show per capita "total sugars" consumption rose not fell for both adults (between 1983 and 1995) and children (between 1985 and 2007). Second, per-capita soft-drink consumption rose not fell over the available 1994-2006 period."...

Apparent consumption

But the big figure in this argument, the cornerstone of the Australian Paradox, is the "apparent consumption" number. What Robertson found after some digging and questioning of the Australian Bureau of Statistics, is that.....

Michael Pascoe is a BusinessDay contributing editor – who has a love of fructose-laden dark chocolate.

<http://www.smh.com.au/business/economist-v-nutritionists-big-sugar-and-lowgi-brigade-lose-20120307-1uj6u.html#ixzz24sJ6luux>

"Research causes stir over sugar's role in obesity"

The Sydney Morning Herald, 31 March 2012, by Mark Methereil, Health correspondent

THE Sydney University nutritionist Jennie Brand-Miller holds out a tempting message for sweet tooths and companies such as Coca-Cola: sugar is not to blame for obesity in Australia.

The Australian Paradox is the title of a scientific paper Professor Brand-Miller and the Australian Diabetes Council research adviser Alan Barclay have written. It seeks to show that while obesity rates continue to swell, refined sugar consumption has fallen in recent years.

Although mainstream nutrition specialists have distanced themselves from the finding, the food industry, and Coca-Cola, have seized on the study to oppose tougher advice against sugar in the nation's diet bible.

The Australian dietary guidelines, which are in the process of finalisation and will be released later this year, are the subject of intense pressure from food companies urging a good word for their products.

Public health advocates are not happy with the way the food industry and particularly the sugar sector are, through their supporters, contesting the concerns about sugar and health.

The Queensland senator Ron Boswell went in to bat for the sugar industry in the Senate recently, deploring an article in the science journal Nature titled "The toxic truth about sugar". He said the article sought to "demonise" sugar by comparing it with alcohol.

Professor Brand-Miller was reported as being "disgusted" by the Nature article. In The Australian Paradox, she and Dr Barclay challenge the widely-held view linking sugar with obesity, saying statistics show obesity has risen three-fold while consumption of sugar has fallen 16 per cent in the 23 years to 2003.

In formal submissions, both the Australian Food and Grocery Council and Coca-Cola cite the study to counter the call in the draft dietary guidelines for a reduction in the consumption of sugary food and drink.

The study, however, has drawn a fiercely critical response from the economic commentator Rory Robertson, a born-again believer in a fructose-free diet, through which he says he shed 10 kilograms over eight months without extra exercise.

Mr Robertson says the paradox argument relies on misinterpreted statistics, some of which are no longer collected because of unreliability. In response, Professor Brand-Miller says Mr Robertson is not a nutritionist and does not understand nutrition.

Boyd Swinburn, an authority on obesity issues, has reviewed the arguments from both sides and comes out broadly in favour of Mr Robertson.

Professor Swinburn, who is the director of the World Health Organisation collaborating centre for obesity prevention at Deakin University, says the study's summary of the data as showing "a consistent and substantial decline in total refined or added sugar by Australians over the past 30 years" belies the facts "and is a serious over-call in my opinion".

His conclusion is that "the ecological trends of sugar and obesity are pretty well matched and I do not believe there is any paradox to explain".

Professor Brand-Miller told the Herald the emphasis on sugar in diets was "overblown" and not enough attention was given to the role of refined starches in obesity.

She and Dr Barclay are principals of the Sydney University-based Glycemic Index Foundation, a non-profit organisation that seeks to promote healthier carbohydrate foods - those that are digested slowly with benefits to blood glucose and insulin levels - among consumers and food suppliers.

The foundation is associated with low glycemic index (GI) products, including a "low GI cane sugar" brand manufactured by CSR, which is among companies that pay licence fees for a GI symbol on their products. The foundation says all proceeds are used to spread awareness about GI.

"This is not about commercial interests," Professor Brand-Miller says. "This is about a considered, expert opinion based on being a nutritionist for 35 years and having a sincere belief that sugar in moderation contributes to a safe and healthy diet."

<http://www.smh.com.au/national/health/research-causes-stir-over-sugars-role-in-obesity-20120330-1w3e5.html#ixzz24sCMGvdx>

Dr Rosemary Stanton slams *Australian Paradox*

*"And yes, I agree with you [Rory] that **we have no evidence that sugar consumption in Australia has fallen**. A walk around any supermarket shows that huge numbers of foods contain sugar. I argue this point frequently with colleagues";*

"I have many objections to that particular paper and to the idea that sugar is not a problem"; and

*"I have expressed my opinion about the paper to the authors and - when it was published - I commented on it in several fora. I will almost certainly cite it at some stage as an example of **something I consider to be incorrect**".*

[My bolding; http://theconversation.edu.au/two-books-one-big-issue-why-calories-count-and-weighing-in-6372](http://theconversation.edu.au/two-books-one-big-issue-why-calories-count-and-weighing-in-6372)
<https://theconversation.edu.au/energy-drinks-a-trigger-for-heart-attacks-and-stroke-7036>

Professor Boyd Swinburn slams *Australian Paradox*

*...Boyd Swinburn, an authority on obesity issues, has reviewed the arguments from both sides and comes out **broadly in favour of Mr Robertson.***

*Professor Swinburn, who is the director of the World Health Organisation collaborating centre for obesity prevention at Deakin University, says the study's summary of the data as showing "a consistent and substantial decline in total refined or added sugar by Australians over the past 30 years" **belies the facts "and is a serious over-call in my opinion".***

*His conclusion is that "the ecological trends of sugar and obesity are pretty well matched and **I do not believe there is any paradox to explain".***

My bolding; <http://www.smh.com.au/national/health/research-causes-stir-over-sugars-role-in-obesity-20120330-1w3e5.html#ixzz23Rs9ydiC>

Professor Robert Lustig slams *Australian Paradox*

...Anecdotally, after having visited Australia three times in the past 10 years (2000, 2004, and the last time Adelaide in 2008), I would be hard pressed to believe that Australians' consumption of sugar is declining... I cannot specifically say why the FAO data for Australia exhibits the opposite trend versus every other country, but when 163 countries say one thing, and 1 country says the other, you have to wonder about the veracity of the data. An n of 1 is not a thesis. ...So I will continue to take issue, on academic grounds, and irrespective of the Australian consumption data, with your statement about the benignity of sugar consistent with any other carbohydrate. I heard Leigh Dayton's interview by podcast on Australian Radio discounting sugar as an issue, in part because of your statement in The Australian. I remain concerned that Australians do so at their (and your) own risk. "

Letter to Professor Jennie Brand-Miller (undated) from Professor Robert Lustig
(Reproduced with permission; My bolding)

Bill Shrapnel highlights big hole in *Australian Paradox*

...a major source of the data on sugar consumption was 'apparent consumption' data, which had ceased to be collected by the Australian Bureau of Statistics (ABS) after 1998/9. So, any suggestion that sugar consumption had continued to fall from 2000 could not be supported.

Bill Shrapnel is Deputy Chairman, University of Sydney Nutrition Research Foundation (<http://scepticalnutritionist.com.au/?p=514> , 8 October 2012) My response to Bill Shrapnel's contribution to the debate can be found here at #21 in <http://www.australianparadox.com/>

Dr Alan Barclay contradicts *Australian Paradox*

*...[an ABARE sugar series] is often quoted by a certain author [David Gillespie]. And what he tends to do is quote **from 1980 onwards**, where you can see that **there's been an increase in sugar consumption basically...and also... and this is just sucrose I should add - refined sugar** - not total sweeteners or anything else...and looks at that in relation to overweight and obesity and you could be forgiven for assuming that there was a positive association [not "an inverse relationship!"]...but the dataset in fact goes back all the way to 1966....*

This is a transcript of Dr Barclay's discussion of Slide 34 from 21.53 minutes at <http://www.livepositively.com.au/Webinar?id=5> , in a June 2011 video presentation sponsored by *The Coca-Cola Company*.

Nutritionist's impressive back-flip on *Australian Paradox*

In 2011, Chris Forbes-Ewan - "Senior Nutritionist" at Defence Science and Technology Organisation - wrote on a public blog:

Some time ago I wrote in a comment: 'The paper by Alicia Sim and Alan Barclay that was presented at DAA last year has been submitted for publication (I'm not sure where). If it passes the peer-review process and is published, then I would regard that as the best evidence available. Until better evidence comes along, I would then accept that consumption of added fructose has probably declined in Australia (while it has increased in the US) at the same time as obesity has reached epidemic proportions in both countries.'

The paper [now] has been accepted for publication in the journal Nutrients. It was e-published late last month:

<http://www.mdpi.com/2072-6643/3/4/491/> Alan Barclay and Jenni Brand Miller (sic) are cited as the co-authors. The conclusion includes: 'The findings confirm an "Australian Paradox" — a substantial decline in refined sugars intake over the same timeframe that obesity has increased. The implication is that efforts to reduce sugar intake may reduce consumption but may not reduce the prevalence of obesity.'

Until better evidence comes along, I will accept that sugar (and therefore fructose) intake has decreased in Australia and the UK while the obesity epidemic has been surging ahead. This directly contradicts David's [Gillespie] claims that fructose intake has increased in parallel with the obesity epidemic.

(May 6, 2011 9:08 PM <http://www.raisin-hell.com/2010/01/attack-of-chocolatier.html> ; My bolding)

In August 2012, after being challenged for conspicuously not citing his favourite "best evidence," Chris Forbes-Ewan wrote:

I don't know whether the consumption of added sugars has increased, decreased or remained the same in Australia in recent years. I don't believe anyone else knows the answer to this question, either.

When challenged again for being disingenuous about his new view on *Australian Paradox* – he crankily repeated that response:

I responded to your question with a clear and unambiguous answer: Neither I nor anyone else can be sure whether sugar consumption has increased, decreased or remained steady in Australia in recent decades.

(<http://theconversation.edu.au/what-role-does-fructose-have-in-weight-gain-7424>)

What an impressive back-flip! Last year, Chris Forbes-Ewan thought the paper so important that he chased David Gillespie all over the Internet to poke him in the eye with it. Now, after having had the opportunity to see that *Australian Paradox* is dominated by a series of serious errors, he runs a mile to avoid even mentioning it by name. Again, what "Australian Paradox"?

Yet poorly advised University of Sydney Vice-Chancellor Dr Michael Spence unwisely vouched for the veracity of the hopelessly flawed *Australian Paradox* paper!

"Dear Mr Robertson

I have received your e-mail of 24 May.

On the advice available to me the report of Professor Brand-Miller's research which appears in *Nutrients* was independently and objectively peer-reviewed prior to its publication in that reputable journal.

In that circumstance there is no further action which the University can or should take in relation to your concerns.

Yours sincerely
Michael Spence

DR MICHAEL SPENCE | Vice-Chancellor and Principal

UNIVERSITY OF SYDNEY".

This statement was written on 28 May, 2012. At some point, Dr Spence may start to wonder why or how his adviser came to mislead him on the veracity of the paper – was it inadvertent or deliberate?

<http://www.australianparadox.com/pdf/SydneyUniVC%20LETTER070612.pdf>

After three months, no-one has collected my \$40,000

Challenge issued to University of Sydney Vice-Chancellor Dr Michael Spence, on 7 June 2012

...I challenge the University of Sydney's scores of fine scientists – indeed, any scientist, nutritionist, medical doctor, economist, journalist or enthusiastic observer anywhere - to prove that my critique of Australian Paradox is mistaken.

*To be clear, I will reward the first successful researcher with \$20,000 (cash), if anyone is able show beyond dispute that the available (valid) information really "...indicates a consistent and substantial decline in total refined or added sugar consumption by Australians over the past 30 years", as concluded in Australian Paradox. Moreover, I will pay **a further \$20,000 to the charity of choice** at the University of Sydney's low-GI school, and **publish a genuine public apology** in The Sydney Morning Herald, The Australian and The Australian Financial Review. What could be fairer to the University of Sydney? Here's an opportunity to (i) show everyone that the annoying economist is wrong, (ii) secure a public apology in major newspapers, and (iii) relieve him of the price of a new car in the process.*

<http://www.australianparadox.com/pdf/SydneyUniVC%20LETTER070612.pdf>

Misguided tri-level defence of *Australian Paradox*

- Amusingly, my critique of *Australian Paradox* has been formally rejected by:
 1. Dr Alan Barclay and Professor Jennie Brand-Miller - the authors, the latter also “Guest Editor”;
 2. Professor Peter Howe - the Editor-in-Chief of the journal *Nutrients*; and
 3. Dr Michael Spence - the Vice-Chancellor of the University of Sydney
- In my opinion, all four have demeaned themselves by defending the indefensible rather than fixing the mess.
- Only Dr Michael Spence has any real excuse, because he merely accepted **poor "advice"** – but from whom, and was his adviser’s misinformation inadvertent or deliberate?
- Sorry, but there’s absolutely **no room for debate** on whether or not the paper features serious errors. Valid data point up not down and a key dataset was discontinued, yet the authors/Guest Editor published twice!
- In terms of "peer reviewed" and published incompetence, could it get any better? Well, check out the extraordinary rebuttal process documented in the next dozen or so slides! The authors’ eye-popping initial false made-up claim in response to my critique - that cars not humans were eating a big chunk of the available sugar via ethanol production - provides **unmistakable confirmation** that their study is lightweight and sloppy with important facts, and their conclusion spectacularly wrong. Then came the unscholarly unacknowledged delete.
- Please tell me why this entire episode is not an example of incompetence morphed into misconduct?

Authors' initial rebuttal featured “Ethanol mix-up”

RESPONSE TO RORY ROBERTSON

Jennie Brand-Miller and Alan Barclay

The *Australian Paradox* reported the observation that upward changes in the prevalence of overweight and obesity in Australia run counter to changes in *refined* sugars intake (1). Rory Robertson claims there is no Australian Paradox, just unreasonable treatment of the available data. Unfortunately, there are factual errors in Mr Robertson's essay and misinterpretation of the distinctions between total sugars vs refined sugars, sugar availability vs apparent consumption, sugar-sweetened and diet soft drinks, and other nutrition information. The terminology, strengths and limitations of various nutrition data are readily understood by individuals trained in nutrition.

Our peer reviewed, published analysis showed a consistent decline in refined sugar (sucrose) consumption by Australians over past decades

The Australian Paradox relied on three independent lines of evidence: national dietary surveys, beverage industry data and apparent consumption data from the United Nations Food and Agricultural Organisation (FAO).

<http://www.australianparadox.com/pdf/RESPONSE-TO-ROBERTSON.pdf>

Awkward uptrends, a discontinued dataset and a slippery disappearing “Ethanol mix-up”

Our peer-reviewed published analysis argued the case for a decline in refined sugar (sucrose) consumption by Australians over past decades. By several indicators, it has decreased over the same timeframe that the prevalence of overweight and obesity has risen strongly. This paradox challenges the current focus on sources of refined sugar, sucrose or fructose as primary players in the development of overweight and obesity in Australia.

The Australian Paradox relied on three independent lines of evidence: national dietary surveys, apparent consumption data from the United Nations Food and Agricultural Organisation (FAO) and beverage industry data.

“Ethanol
mix-up”
(Quietly
deleted,
nothing
conceded)

But sugar availability is a not the same as consumption. Sugar availability takes no account of food wastage, use in animal food, beer and alcohol fermentation, or in non-food industrial use, and we cannot assume that a *steady* portion is lost in this way. Globally, raw sugar is an important ingredient for ethanol production. In Australia, ABARE data (10) show that ethanol production as a biofuel for transport rose from 42 million litres to 209 million litres (almost 4-fold) from 2005 to 2009¹.

¹ If 100% raw sugar were used for this purpose and the fermentation process were 100% efficient (it isn't), it would require ~14 kg per capita per year, ie a significant proportion of the 'available' sugar. Although there are no firm figures for how much raw sugar is presently being used for ethanol production, supplies of C-molasses alone are not adequate, and the absolute amounts are likely to be increasing.

Published rebuttal, after “Ethanol mix-up” quietly deleted

Correspondence

The Australian Paradox Revisited

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The *Australian Paradox* reported the observation that upward changes in the prevalence of overweight and obesity in Australia run counter to changes in *refined* sugars intake [1]. Economist, Rory Robertson claims there is no Australian Paradox, just unreasonable treatment of the available data [2]. Unfortunately, there are factual errors in Mr. Robertson's essay and misinterpretation of the distinctions between total sugars vs. refined sugars, sugar availability vs. apparent consumption, sugar-sweetened and diet soft drinks, and other nutrition information. While the terminology, strengths and limitations of various nutrition data are readily understood by individuals trained in nutrition, some confusion may have been avoided if our original paper had referred to refined sugars in its title and described the terminology used.

<http://www.australianparadox.com/pdf/nutrients-03-00491-s003.pdf>

Will authors at least fix mis-spelling of “Roberston”, given that they already have corrected tangle in references?

OPEN ACCESS

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Correction

Barclay, A.W. and Brand-Miller, J. The Australian Paradox: A Substantial Decline in Sugars Intake over the Same Timeframe that Overweight and Obesity Have Increased. *Nutrients* 2011, 3, 491-504

Alan W. Barclay ¹ and Jennie Brand-Miller ^{2,*}

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We have found some errors in our paper published in *Nutrients* [1]. We found that reference 18 in section 2.2 should be removed, the reference 18 in section 3.1 should be replaced with reference 19 and the reference 33 should be corrected as follows.

33. Rangan, A.M.; Kwan, J.; Flood, V.M.; Louie, J.C.Y.; Gill, T.P. Changes in “extra” food intake among Australian children between 1995 and 2007. *Obes. Res. Clin. Pract.* **2011**, *5*, e55–e63.

We would like to apologize for any inconvenience caused to our readers.

My name mis-spelled as “Roberston” appears at the bottom of page 3 of
<http://www.australianparadox.com/pdf/nutrients-03-00491-s003.pdf>

***Nutrients'* Editor-in-Chief bemoans my insistence that quality control be introduced at his negligent journal**

Editorial

The Australian Paradox

Peter Howe

Editor-in-Chief of Nutrients, Nutritional Physiology Research Centre, Sansom Institute for Health Research, School of Health Sciences, University of South Australia, Adelaide, South Australia 5001, Australia; E-Mail: peter.howe@unisa.edu.au; Tel.: +61-8-8302-1200; Fax: +61-8-8302-2178

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Nutrients has become the target of an unprecedented internet campaign by an individual who disagrees with the content and conclusions of a paper published in the journal last year, viz. “The Australian Paradox: A Substantial Decline in Sugars Intake over the Same Timeframe that Overweight and Obesity Have Increased” by Alan W. Barclay and Jennie Brand-Miller, *Nutrients* **2011**, *3*, 491–504. Regrettably, his criticism has extended to the journal and its peer review processes for permitting publication of the article.

As you may know, *Nutrients* is one of an extensive series of on-line open access journals published

<http://www.mdpi.com/2072-6643/4/4/258/htm>

My response can be viewed at: <http://www.australianparadox.com/pdf/TimeforNeweditor24052012.pdf>

What would competent “peer review” look for?

Okay, so you’ve been asked to review a scientific paper that concludes there’s been a “**substantial decline**” in the consumption of added sugar “**over the past 30 years**”. What’s the main thing you would need to see? Yes, it’s rather important that the authors’ charts show valid indicators of sugar consumption trending down, **not up!**

Awkwardly, all four valid data series – in **the authors’ own published charts** - trend up not down! Huh? As a referee, you’d see a series of the authors’ charts trending in the **wrong direction** as a serious problem, yeah?

Is Fructose a *Toxic Carb*?

What about spelling?

Mr. Roberston expresses concerns about fructose intake in particular. The primary refined sugar used in Australia is sucrose, which yields 50% fructose by weight. Fructose also represents about ~50% of the natural sugars in fruit, vegetables and grains [15]. The large majority (95%) of

Also, as a referee, you might query how – or why? - the authors managed to ignore the fact that the dataset underlying their preferred series was **discontinued as unreliable by the ABS after 1998-99**? Perhaps you would say to *Nutrients’* Guest Editor - and also to its Editor-in-Chief - that any conclusion based solely on that discontinued dataset is invalid, and argue that paper is an academic embarrassment that should not be published?

Quality control at *Nutrients* and the University of Sydney

- ***Nutrients*** is a pay-for-publication E-journal. Clearly, in the case of *Australian Paradox*, it had no credible quality control. After all, the original paper was published despite dominating errors - a series of charts that point up rather than down, alongside a preferred series that is based on an ABS dataset that was discontinued as unreliable by the ABS after 1998-99. Wrong and wrong again! And not by just a little bit. Then, there was an incompetent and unscholarly “Ethanol mix-up” on the way to a published rebuttal that did not address the key criticisms. And shouldn’t “peer review” also fix obvious spelling errors like “Roberston”?
- The perplexing question is how could this negligence have been published in a peer-reviewed science journal? Twice! Who knows? What we do know, however, is that the **“Guest Editor”** of the relevant “Special Issue” was Professor Jennie Brand-Miller herself, also the lead author of the deeply flawed paper. **Isn’t quality control supposed to be objective?** Has an author wearing an Editor's hat ever decided: “Sorry, but my paper is full of serious errors culminating in a spectacularly false conclusion, so I’ve decided to junk it rather than publish it”?
- Quality control is supposed to be imposed by authors, “peer review” and an editor. In this case, Professor Brand-Miller ran the show. Beyond an editor who always was unlikely to cull her own dud paper, the relevant “peer review” evidently was either incompetent, non-existent or ignored. **The end result is two error-ridden published papers that mislead the public debate on the causes of obesity, the biggest public-health issue of our times.**
- There might somehow be a good explanation for one deeply flawed paper, but to publish twice without correcting the first round of errors is unacceptable. How is it that the authors were able to publish a rebuttal – ***Australian Paradox Revisited*** - that did not address the specific dominating errors that were highlighted in my critique?
- In any case, **why** did a famous University of Sydney Professor choose to publish a supposedly profound scientific observation – “an inverse relationship” between the consumption of refined sugar and obesity, the Australian Paradox! - in a tin-pot E-journal? Was the paper initially rejected by real journals with real quality control? And if not, why not?
- My concern is that there’s no effective quality control on the output of these high-profile scientists. **Who, if anyone, is in charge of quality control at the University of Sydney?** (These issues are discussed in detail with leading nutritionist Dr Rosemary Stanton and others at <https://theconversation.edu.au/what-role-does-fructose-have-in-weight-gain-7424#comments>)

“Scientists” desperate for a big “Leakage”

The ABS dataset (4306.0) providing the basis of the authors’ preferred FAO “Apparent consumption” series was discontinued as unreliable after 1998-99, yet bizarrely the authors have published charts out to 2003! That – by itself – merits a correction if not the retraction of *Australian Paradox*. The FAO series was increasingly unreliable before becoming **invalid** after the ABS stopped counting. Our inexperienced analysts fell into the “trap for young players” of downloading an FAO series contrived by tacking something made-up onto the ABS’s abandoned endpoint: {“*calc. on 37 kg. per cap. as per last available off. year level (1999)*”}.

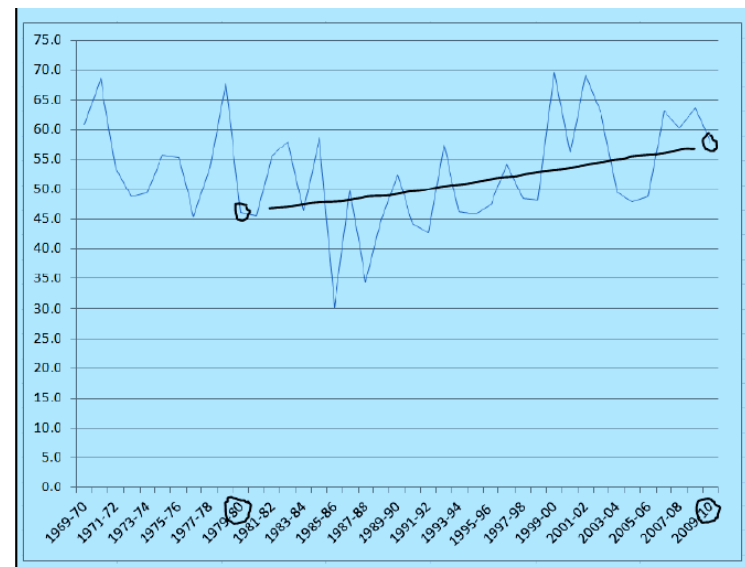
Given that unavoidable data void, I wrote that the “**next best thing to a timely measure of apparent consumption**” is a measure of “**sugar availability**”. That’s because “Sugar availability” - domestic production less exports - is a timely official series that is published annually by ABARES and - critically - is the **dominant** component of any “Apparent consumption” calculation:

Apparent consumption of sugar ~ Sugar availability + Imports – “Leakages”

The authors’ own Figure 1 (below) shows that sugar availability (kg p.p. p.a.) trended up between 1980 and 2010. So too, the available data suggest that hard-to-measure **sugar imports also have trended up** (Slide 20). The authors thus **needed to identify a big and fast-growing “Leakage”** to generate a declining trend for consumption. With no other plausible story available, their rebuttal explained that **ethanol production** was consuming a big chunk (up to 14kg) of the available sugar. Wrong (next slide)!

And again, imagine your personal credibility if you kept publishing a supposedly serious discussion about a “substantial decline” in the apparent consumption of cars (or sugar), without noticing and/or acknowledging fast-rising imports (driven by globalisation and a decade-long uptrend in the A\$).

Figure 1:



Source: *Australian Paradox Revisited* ; My “trend” for “the past 30 years”

Sorry, we have no sugar in our ethanol!

Table 6.1 Australian ethanol production capacity (ML): 2010 to 2015

Operator	Location	Feedstock	Current Status	2010	2011	2012
Manildra	Nowra, NSW	wheat starch, wheat	Operating	210	300	300
Sucrogen Bio-Ethanol	Sarina, Qld	molasses	Operating	60	60	60
Dalby Bio	Dalby, Qld	sorghum, other grain	Operating	80	80	80
Austcane	Ayr, Qld	sugar juice, molasses	Potential	0	0	0
NQBR	Ingham, Qld	sugar juice, molasses	Potential	0	0	0
Coskata	Vic.	biomass	Potential	0	0	0
Mackay Sugar	Mackay, Qld	molasses	Potential	0	0	0
Total from existing plants				350	440	440
Total from (proposed) new and existing plants				350	440	440

Source: APAC *Australian Biofuels 2010–11*

<http://www.accc.gov.au/content/item.phtml?itemId=961783&nodeId=c5006d5e6145ec6c55231148c819855e&fn=ACCC%20Petrol%20Monitoring%20Report%20Chapter%206.pdf>

Journalist Michael Pascoe skewers “scientists”

...After BusinessDay published the original story in March, [Professor] Brand-Miller sent me a reply to Robertson's argument [<http://www.australianparadox.com/pdf/RESPONSE-TO-ROBERTSON.pdf>]. That reply put the “sugar availability” discrepancy substantially down to sugar being used to make fuel ethanol: “Sugar availability takes no account of food wastage, use in animal food, beer and alcohol fermentation, or in non-food industrial use, and we cannot assume that a steady portion is lost in this way. Globally, raw sugar is an important ingredient for ethanol production. In Australia, ABARE data show that ethanol production as a biofuel for transport rose from 42 million litres to 209 million litres (almost four-fold) from 2005 to 2009.”*

A footnote added that the increase in ethanol production would require about 14 kg of sugar per capita per year if 100 per cent raw sugar was used to make it. “Although there are no firm figures for how much raw sugar is presently being used for ethanol production, supplies of C-molasses alone are not adequate, and the absolute amounts are likely to be increasing,” wrote the academics.

There's a good reason why there are “no firm figures” - sugar is not used for ethanol production in Australia, as the cursory of Google searches on Australian biofuels would show. Fuel ethanol here is produced from red sorghum and waste products from sugar and starch production.

I told the Professor I thought she was wrong, she checked and admitted that was the case. Having failed on two of the three key issues with the jury out on the third, I didn't bother about the reply. In the Nutrients e-journal, Brand-Miller and Barclay published their reply to Robertson under the title Australian Paradox Revisited with the ethanol bit deleted.

*... *<http://www.smh.com.au/business/economist-v-nutritionists-big-sugar-and-lowgi-brigade-lose-20120307-1uj6u.html>
<http://www.smh.com.au/business/pesky-economist-wont-let-big-sugar-lie-20120725-22pru.html#ixzz22MqjmOF4>*

*Like me, Michael Pascoe naturally assumed - after the implosion of their utterly unconvincing rebuttal - that the authors would correct or retract their original paper, so he left them to it. Instead, they looked around to see if anyone was watching, and then quietly deleted their latest serious factual error, before publishing again the same false conclusions in *Australian Paradox Revisited*. Indeed, unreasonably conceding nothing, they decided to go with the story that the economist (buffoon) Robertson's critique features (unspecified) “factual errors” and (imagined) “misinterpretations”. How's that for scholarship? Again, who – if anyone - is in charge of quality control at the University of Sydney?*

Does this episode involve more than just incompetence?

- Yes, the University of Sydney “scientists” were skewered by a highly respected journalist who documented **less-than-ideal scholarly conduct** (shall we say) on the way to their utterly unconvincing published rebuttal of my critique: <http://www.smh.com.au/business/pesky-economist-wont-let-big-sugar-lie-20120725-22pru.html>
- Importantly, the University of Sydney scientists’ main specific argument in response to the devastating critique of their paper was (also) absolutely false. Did you notice the slippery disappearing made-up claim of **up to 14kg per person** per annum of raw sugar being consumed by the rapid growth of ethanol production? The significance of that false but amusing explanation is that it was **carefully calibrated** – based on nothing much - to advance the argument that the implied trend for “Apparent consumption of sugar” (by humans) in Figure 1 is down not up. (Trust us, we’re nutritionists - we know Australia’s food supply!)
- Awkwardly, the explanation – produced while under scrutiny - was quickly revealed as silly and false because **the real answer is zero**. That is, sugar is not used in ethanol production in Australia. **So, again, with all four valid big-picture sugar indicators featuring in this episode – including domestic availability plus sugary imports – still pointing up not down in the relevant time-frame, there is no good reason to publish or defend a scientific paper concluding as fact that the consumption of (added) sugar declined substantially between 1980 and 2010.**
- **Yet the University of Sydney scientists rushed off to publish *Australian Paradox Revisited* anyway**, deleting their silly false explanation but refusing to concede anything, let alone that *Australian Paradox*’s always-unlikely conclusion of “an inverse relationship” between sugar consumption and obesity is unsupported by evidence. How come “peer review” did not stop the rapid publication of this fluffy rebuttal that doesn’t address the paper’s key faults? Why are this pair seemingly allowed to publish at will? Beyond incompetence, is this well-documented episode an example of scientific fraud? Who, if anyone, is in charge of quality control at the University of Sydney?
- For the record, the authors’ claim that ethanol (so cars not humans) consume a big chunk of the available sugar is found at the bottom of page 2 at <http://www.australianparadox.com/pdf/RESPONSE-TO-ROBERTSON.pdf> while the published rebuttal - *sans* key explanation - is at <http://www.australianparadox.com/pdf/nutrients-03-00491-s003.pdf>

Crunch-time for Dr Barclay and Prof. Brand-Miller

In my opinion, the key question is **WHY** the exact moment in March that Dr Alan Barclay and Professor Jennie Brand-Miller agreed with each other that it was time to quietly retract/delete without acknowledgement their false made-up claim about ethanol production/cars consuming a big chunk of the available sugar, somehow was **NOT** also the right moment to agree to formally correct or retract their error-ridden *Australian Paradox* paper?

The unreasonable delay in removing the clearly false but supposedly twice-verified claim of an "Australian Paradox!" - an extraordinary "inverse relationship" between sugar consumption and obesity - from the scientific record increasingly has reasonable people wondering when a series of inadvertent errors deliberately left uncorrected becomes **scientific misconduct or fraud?** (http://en.wikipedia.org/wiki/Scientific_misconduct)

Any thoughts, anyone?

Scientific fraud?

The authors of the University of Sydney's error-ridden *Australian Paradox* paper have consistently represented me – an economist - as clueless in this episode because I am “not a nutritionist”. It's too bad that's their best argument!

In any case, as a cross-check on my sense of "balance" on this matter, I recently contacted a distinguished Australian economist/intellectual - a retired high-level public official now active elsewhere - who has been a keen observer of the public debate for many decades.

He's been there and seen that, so I sought his seasoned advice on what I see as an important issue. I emailed: “...if you have time, do you have in your head a concise definition of [i] academic misbehaviour; [ii] scientific fraud”?

His answer was brief, cutting to the chase: "Yes, this seems an example of both."

Dr Sydney Nutrition's "Australian Blue Kangaroo"

- The analysis and key conclusions of *Australian Paradox* are spectacularly wrong and the paper has become a menace to public health (<http://www.australianparadox.com/pdf/WHO'S%20CITING%20OZ%20PARADOX.pdf>). Accordingly, in my strong opinion, the *Australian Paradox* paper should be corrected or retracted without further unreasonable delay.
- To help make clearer the case for correction or retraction, here's a simple "Australian Blue Kangaroo" analogy. Start with the widely known fact that in Australia there are only two species of large kangaroo, the Red and the Grey (alongside many smaller species). **The scenario: Late one afternoon a hard-working scientist on a field trip in far-western NSW secures a series of photos that seem to show a never-before-seen "Blue" kangaroo. The scientist - let's call him Dr Sydney Nutrition – then enthusiastically claims to have discovered a new species, and the claim - backed up by the fabulous photos - is published in a pay-for-publication science E-journal, *Species*.** Suddenly, there's a new species - the "Australian Blue Kangaroo" - documented in a peer-reviewed scientific journal, via a now-familiar editorial and peer-review process that, to put it nicely, lacked credibility.
- Well, that's all fine until Joe Blow - a competent non-scientist - comes along and says, "Hey, hang on, that's just a Red kangaroo photographed late in the day with the particular glare of the sun making it look "blue". Here, let me show you". And sure enough: at 6.55pm, it's a Red Kangaroo; at 7.05pm, it's a "Blue" Kangaroo; and by 7.15pm, the sun is completely below the horizon.
- The non-scientist's demolition of the Australian Blue Kangaroo claim is then confirmed by three respected scientists - let's call them Dr Boyd and Professors Rosemary and Lust. Of course, most other observers rightly were rather sceptical in the first place. Accordingly, the mistaken scientist with his straight-faced claim of a new species - the Australian Blue Kangaroo! – would be well advised to quickly concede his inadvertent error, and retract his negligent claim of having discovered a new species. **Any unreasonable delay in correcting the scientific record by Dr Sydney Nutrition would have reasonable observers wondering when an inadvertent but spectacular error deliberately left uncorrected becomes an attempt at scientific fraud? Or was it a deliberate if lame attempt at scientific fraud in the first place?**
- In my opinion, the University of Sydney's "Australian Paradox" claim is not completely dissimilar to Dr Sydney Nutrition's (fictional) inadvertent "Australian Blue Kangaroo" claim above. That is, the sensational scientific observation of "an inverse relationship" between sugar consumption and obesity – "look, an Australian Paradox!" - was disproved as soon as someone correctly noted that the high-profile University of Sydney scientists had **carelessly and completely misread the range of available information on trends in (added) sugar consumption**. It's way past time to retract the spectacularly false claim. Again, whatever happened quality control at the University of Sydney?

Australian Paradox, the scientific record and the public debate

- In my opinion, it's unacceptable for academics and other scientists to publish as fact things that are false, and then not correct the errors, leaving the public misinformed. That simply erodes academic and scientific integrity, and public trust.
- The scientific record is supposed to be populated by factually correct information, via the oversight of a competent peer-review process. **Critically, the public debate - including the current debate on the causes of obesity, diabetes and related maladies, the biggest public-health issue of our time - needs to be based on facts.**
- Now, senior University of Sydney scientists very active in the public debate have published in a scientific journal a supposedly peer-reviewed paper that contains a deeply flawed reading of the available data, and factually incorrect conclusions. In particular, Australia's highest-profile academic defenders of added sugar in food (as harmless) - with the deepest academic links to the sugar industry and other sugar sellers via their Glycemic Index enterprise - have falsely exonerated refined sugar as a key factor in the development of obesity.
- The peer-review process in this case evidently was either incompetent, non-existent or ignored, because the published paper is dominated by a several basic but obvious errors. The lead author also was the "Guest Editor" of the relevant "Special Issue" of the journal. Neither of those things are good. A "Big Red Flag" has been waving since Day One.
- Disturbingly, after various respected analysts - including myself, Dr Rosemary Stanton and Professor Boyd Swinburn - had pointed out that their published analysis is wrong and their conclusions false, **the authors rushed off and republished their false conclusions as fact – in *Australian Paradox Revisited* - without addressing the specific and dominating factual errors in their analysis.** Since then, they have refused to correct the scientific record and along the way have **misinformed** journalists in major newspapers - and via them the general public - on the veracity of the paper and so the causes of obesity. Based on poor advice from an unidentified "adviser", University of Sydney Vice-Chancellor Dr Michael Spence has unwisely vouched for the veracity of the woeful paper. All this misinformation needs to be fixed.
- In my opinion, it's absolutely unacceptable for two of Australia's highest-profile scientists to poison the public debate on obesity and (so) diabetes with false claims, especially after the claims have been shown clearly to be mistaken. **The scientific record needs to be corrected and the public debate must be allowed to proceed without dangerous detours engineered by the prestigious but in this case negligent University of Sydney. In my opinion, the degree of misinformation in this *Australian Paradox* episode is an academic disgrace and a public-health scandal.**

Why correcting *Australian Paradox* is crucial

- *Australian Paradox* is not some obscure factually incorrect study that would not have seen the light of day but for me. In fact, the **Heart Foundation, Diabetes Australia, Nutrition Australia and the Dietitians Association of Australia** all seem to have drawn false comfort from the paper's **mistaken conclusion of "an inverse relationship" between sugar consumption and obesity**. In turn, these entities unfortunately have tended to misinform many of those countless Australians who have made contact seeking reliable nutrition and health advice.
- The deeply flawed paper also is cited by **the Australian Food and Grocery Council** in its lobbying against the proposed (mild) recommendation to limit (added) sugar consumption in the Australian Government's current draft nutrition guidelines. So too, it is cited by **Kellogg's, Coca-Cola, Pepsico, the US Sugar Association, the Canadian Sugar Institute, Mackay Canegrowers and Queensland Senator Boswell** in the Australian Senate. There probably are plenty more, but that's enough for Blind Freddie to see what is going on (see #6 at <http://www.australianparadox.com/>).
- The spectacularly false conclusion of the *Australian Paradox* paper – strongly supported by the University of Sydney's badge of scientific credibility – **provides the intellectual basis for the Heart Foundation to maintain outrageous "Ticks" on breakfast cereals containing 30% added sugar and on other sugary junkfoods** (<http://www.crikey.com.au/2011/02/02/the-sugar-bomb-is-ticking-away-dangerously>). It also provides the intellectual basis for putting **LowGI** stamps on sugary junkfoods.
- As you may know, GI = 55 is the chosen dividing line between low and high GI carbohydrates. Check out the low GIs of high-added-fructose "**Coca Cola**", "**Milo**", "**Snickers Bar**", "**Ice Cream**", and "**Cake**" in a search at <http://www.glycemicindex.com/foodSearch.php> . Importantly, **adding super-low GI=19 fructose** to the product mix is a simple recipe for a lower-GI product. And while the University of Sydney's low-GI advocates choose to **restrict energy, fat and salt** in their low-GI production, **adding sugar/fructose is not viewed as a particular problem**. The good news is that Dr Barclay is keen to help lower the GI reading of manufactured food products, for a tasty payment of \$6000 per product: [http://www.foodhealthdialogue.gov.au/internet/foodandhealth/publishing.nsf/Content/D59B2C8391006638CA2578E600834BBD/\\$File/Resources%20and%20support%20for%20reformulation%20activities.pdf](http://www.foodhealthdialogue.gov.au/internet/foodandhealth/publishing.nsf/Content/D59B2C8391006638CA2578E600834BBD/$File/Resources%20and%20support%20for%20reformulation%20activities.pdf) . (Some food companies are choosing to bypass the paid assistance of the University of Sydney altogether, putting lame "unofficial" **LOW GI** stamps on whatever they please.)
- **My concern is that the deeply flawed paper's spectacular false conclusion is having a very unhealthy influence on what ordinary Australians - seeking to be healthy - are being encouraged to eat. With *Australian Paradox* in the background, the Heart Foundation and the University of Sydney explicitly give added sugar a pretty clear run into our bellies and those of our children.** If the consumption of unnaturally high levels of added sugar/fructose decade after decade is a key driver of the Australian and global obesity and diabetes epidemics – as very likely it is - then *Australian Paradox* is contributing to that growing public-health disaster (<http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all>).
- **From an academic and scientific perspective, the critical fact is that the paper's key conclusions are spectacularly false. And, extraordinarily, the false conclusions have been published twice, in rather disturbing and unusually well-documented circumstances.** In this slideshow I've worked hard to document what I think is **a very strong case for the deeply flawed and somewhat dangerous *Australian Paradox* paper to be corrected or retracted.** Beyond that, I hope my explanation in the paragraphs above helps readers to understand why I feel the need to argue far and wide in an effort to secure that result. If you share my view that *Australian Paradox* is an academic disgrace and a menace to public health, please join me in seeking appropriate remedial action by the University of Sydney.

Australian Paradox 101 – The Future

- Whether or not the *Australian Paradox* paper ultimately is corrected or retracted, it could easily **"go global"** by becoming a fascinating University case-study here and abroad. An introductory lecture on sloppy science - and how it needs to be avoided - *Australian Paradox 101* could engage and amuse first-year students for a solid 90 minutes, as they absorb the basic but dominating errors that were published with the assistance of non-existent, incompetent or ignored fact-checking in the peer-review and editorial processes. And all this at the highest levels of scholarship and science in Australia. The important lesson to be learned is that **robust quality control** is crucial for credible published results, with the **integrity of that evolving scientific record** providing the firm basis for further scientific progress.
- The University of Sydney at some point may want to know more about **how** the deeply flawed paper came to be published – twice! In particular, why was the supposedly profound scientific result - "an inverse relationship" between sugar consumption and obesity, the Australian Paradox! - published by a **distinguished Professor from a prestigious "Group of Eight" university (www.go8.edu.au) in an obscure pay-for-publication E-journal without competent quality control?** And how come the paper happened to print in the edition where the lead author was **"Guest Editor"**?
- With an eye to the future, it must be said that having an influential author simultaneously operating as the "Guest Editor" did **not** strengthen the quality-control process. Robust quality control obviously requires the editor of any journal to be agnostic - at least initially - on the **need** for any particular paper to be published. Two hats in the author/editor relationship certainly are not better than one. A key lesson from this fiasco is that authors should be removed from the editorial/publication process: be an author **or** an editor but never both in the same "Special Issue".
- In my opinion, Group of Eight universities should require their real scientists to publish supposedly important papers only in **real journals with real quality control**, leaving it to no-talent nobodies to scramble over the tiny quality-control hurdles set by little-respected pay-for-publication E-journals with an eye mainly on the validity of their business model.
- Unfortunately, universities and scientists outside the Group of Eight may long enjoy "dining out" on the *Australian Paradox* fiasco. **The University of Sydney's "shonky sugar study" for many will become Exhibit A when B-grade universities and scientists argue that Group of Eight universities and scientists are not as clever as advertised.** Put your hand up if you consider that this particular episode is likely to "extend the contribution of its member universities to the generation and preservation of the world's stock of knowledge"!
- Perhaps only if the episode is launched as a **cautionary tale**. **So I give you *Australian Paradox 101*.**

And it's not just *Australian Paradox*

The University of Sydney scientists' series of (uncorrected) spectacular false claims on added sugar/fructose include:

- i. **Sugar consumption has declined substantially "over the past 30 years", so there's "an inverse relationship" between sugar consumption and obesity (the main result in *Australian Paradox*);**
- ii. **"Fructose Was Not 'Scarce'" in earlier centuries (argued in *Australian Paradox Revisited*).**
- iii. **"There is absolute consensus that sugar in food does not cause diabetes" (published in the co-authors' low-GI diet books).**

On whether fructose once was relatively "scarce", **would you believe that Australians' fructose intake today is little different from levels in pre-European times?** Sure. After all, today's intake facilitated by the commercial farming of sugar cane, fruits and honey **plus** elevated levels of imports of sugary foods and drinks clearly is about the equivalent of occasional snacks of bush honey, bush fruits, "floral nectars" and honey ants (<http://bushtuckerman.com.au/honey-ants/>). Of course we are not eating unnaturally high doses today!

Dr Barclay and Professor Brand-Miller's exoneration of unnaturally high doses of added-sugar decade after decade in the development of both obesity and diabetes – "diabesity" – is quite a stretch, based as it is on nothing much. On that third ridiculous false claim - "There is absolute consensus that [added] sugar in food does not cause diabetes" could either co-author even say that out loud with a straight face? There's "an absolute consensus" – everyone in the world agrees - yet debate rages all around? In fact, elevated consumption of refined sugar for centuries has been strongly linked to diabetes.

This problem of publishing factually incorrect statements on sugar/fructose brings front and centre the issue of the University of Sydney's **serious but undisclosed conflict of interest** when it comes to discussing the health effects of added sugar (<http://www.australianparadox.com/pdf/Sydney-Uni-conflict-interest-030712.pdf>).

Added sugar doesn't drive diabetes either

- **There's a pattern here.** Yes, on top of their mistaken exoneration of added sugar as a driver of **obesity** in *Australia Paradox*, the University of Sydney's Dr Barclay and Professor Brand-Miller also promote another spectacularly false claim - "There is absolute consensus that sugar in food does not cause **diabetes**" - in the flag-ship *Low GI Diet Handbook* (2011; p. 73) and *the diabetes and pre-diabetes handbook* (sic, 2010, p.43). Again, could either co-author even say that out loud with a straight face? There's "absolute consensus", yet debate rages all around? It would be good if the authors' popular diet books also were corrected, to stop ordinary people from being hopelessly misinformed.
- In fact, elevated consumption of sugar for centuries has been strongly linked to diabetes. **In particular, as the British Empire expanded across the globe, the diabetes scourge - often known as "the sugar sickness" - just kept turning up soon after refined sugar and flour were introduced and became popular in distinct local populations:** in South Africa, India, the Middle East, the United States, Canada, Australia, NZ - take your pick. The convincing evidence that sugar is a particular problem is reviewed in Chapter 6 of Gary Taubes's fascinating book *Good Calories, Bad Calories*, a.k.a. "Good Science, Bad Science". (If you haven't seen it, it's a "must read", as is Taubes's later disturbing feature in *The New York Times*: <http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all>)
- Despite the hard facts always strongly suggesting that **elevated sugar/fructose consumption for a couple of decades and diabetes pretty much go hand in hand – a bit like smoking and lung cancer** - modern nutrition "science" lost its way on this matter in the 1960s and 1970s. As Taubes has documented, **incompetent judgments by "powerful authority figures" - especially in the US - saw the real evidence disregarded and any debate squashed.** In Taubes's account, an influential textbook by US diabetes king-pin Elliot Joslin helped to misinform a generation or more of nutrition scientists, often leaving them clueless on the real causes of diabetes. That problem may well be alive and well in Australia, if that spectacularly false quote - "There is an absolute consensus that sugar in food does not cause diabetes" - marketed in low-GI diet books is anything to go by.
- Indeed, it's concerning that one of the scientists who has fumbled sugar/fructose facts so badly also is the "Head of Research" at the Australian Diabetes Council, "sits on the Editorial Board of their (sic) consumer magazine Conquest and their (sic) health professional magazine Diabetes Management Journal" (<http://daa.asn.au/>). David Gillespie recently highlighted serious concerns on that front (<http://www.raisin-hell.com/2012/07/australian-diabetes-council-needs-to.html>).
- Happily, it turns out that **simply removing added sugar and other junk refined carbohydrates from one's diet can reverse obesity and (Type 2) diabetes.** Hard evidence for this claim is found in "Life Without Bread" (2000) by C. B. Allan and Wolfgang Lutz. The book documents Lutz's experience as an M.D. in private practice over several decades in Germany and Austria, with results from thousands of cases confirming that a low-sugar, low-carb diet tends to be effective in reversing obesity, diabetes and related maladies.
- If Gary Taubes, Wolfgang Lutz and the growing army of advocates of "low carb" diets are right, then Australian **diabetics and pre-diabetics** are getting very unhelpful advice from *Diabetes Australia*, which encourages a **very strong focus on carbohydrates – "at every meal" – and especially processed carbohydrates:** http://www.diabetesaustralia.com.au/Documents/NDSS/Resources/Diabetes_Information_Sheets/GLYCEMIC-INDEX-2010.pdf ; http://www.australiandiabetescouncil.com/AustralianDiabetesCouncil/media/PDFs/Diabetes_Making_Healthy_Food_Choices.pdf

University of Sydney's undisclosed low-GI conflict of interest

- Many are aware that the **University of Sydney's low-GI enterprise** revolves around the claim that low-GI carbohydrates - GI 55 and under - are good for your health while those above GI 55 supposedly are bad. **Yet the "sweet poison" half of table sugar - fructose - has a super-low GI of 19, towards the very bottom of the GI scale. Fructose is super-low GI so it must be a "good" food, right?** And if any processed food product is not low GI, then just add fructose, because adding fructose is the simple recipe for a lower GI reading. "How low on the GI scale would you like your manufactured food product, Sir? 54? 53? 45? 40? Please tell me when to stop pouring"! Check out the low GIs of high-added-fructose "Coca Cola", "Milo", "Snickers Bar", "Ice Cream" and "Cake" in a search at <http://www.glycemicindex.com/foodSearch.php>. Interestingly, *Australian Paradox* - sugar/fructose is not the problem - co-author Dr Barclay will assist in the formulation of sugary and other lower-GI products for a tasty one-off payment of \$6000 per product: [http://www.foodhealthdialogue.gov.au/internet/foodandhealth/publishing.nsf/Content/D59B2C8391006638CA2578E600834BBB/\\$File/Resources%20and%20support%20for%20reformulation%20activities.pdf](http://www.foodhealthdialogue.gov.au/internet/foodandhealth/publishing.nsf/Content/D59B2C8391006638CA2578E600834BBB/$File/Resources%20and%20support%20for%20reformulation%20activities.pdf) (Some companies are bypassing the University altogether, putting "LOW GI" on whatever suits.)
- **The fact that fructose has a super-low GI of 19 is the profound flaw in the "GI story". This fundamental flaw is the bit – a serious undisclosed conflict of interest - the low-GI industry avoids mentioning like the plague.** Awkwardly, if super-low-GI fructose turns out not to be "just another carbohydrate", but as harmful as a growing nucleus within the global scientific community believe – that in modern doses decade after decade it is driving global obesity and diabetes – the University of Sydney scientists will have been completely wrong on the thing that matters most. Someone unkind might then say that the low-GI school at the University of Sydney had spent decades seeking to identify "good carbs" and "bad carbs", yet somehow managed **not** to identify the only profoundly bad carbohydrate – fructose (<http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all>).
- In any case, incentives matter, so **it must be noted that the low-GI industry has a strong incentive to sound certain that sugar/fructose is not a problem, and to dismiss the idea that modern doses of super-low-GI fructose are a major driver of global obesity, diabetes and other self-inflicted "diseases of affluence"**. And that's what it did – for whatever reasons – when it published its spectacularly wrong but high-profile *Australian Paradox* paper in the pay-for-publication E-journal *Nutrients*, and what it does on its new website: <http://www.theaustralianparadox.com.au/Fructose.php>
- For the low-GI industry, the good news is that the tastiest and perhaps most-added carbohydrate in the global food supply – fructose – also is pretty well the lowest-GI carbohydrate. The bad news is **that a growing nucleus of global scientific opinion considers super-low-GI fructose - eaten in unnaturally high doses decade after decade - to be the single-biggest driver of the global "diabesity" epidemic** (see nytimes link above).
- **The University of Sydney's conflict of interest boils down to this: (i)** it matters for the prosperity of its low-GI enterprise that super-low-GI fructose - mixed into tens of thousands of processed foods and drinks - remains widely perceived by consumers as safe to eat; **(ii)** the University of Sydney's low-GI advocates have been high profile in claiming low-GI fructose in modern doses is **not** a key driver of obesity or diabetes; and **(iii)** in fact, there is convincing and growing evidence that modern doses of fructose are a key driver of obesity, Type-2 diabetes and other self-inflicted "diseases of civilisation".
- In my opinion, **the general public should be informed about about (i) and (iii) when interpreting (ii).** The evidence that softdrinks are a health hazard is driven by the added sugar not the added water! Just as it turned out to have been a good idea to be sceptical of the tobacco industry's assurances that smoking is not a health hazard, the University of Sydney's senior management, the media and **everyday Australians looking for reliable dietary advice need to be aware that the low-GI industry has a strong - indeed, existential - interest in communicating the claim that added sugar in modern doses is not a problem.**
- Thus low-GI advocates cannot be treated simply as objective observers in any debate involving sugar/fructose and health issues. They have a serious yet still-undisclosed conflict of interest because – **given the ubiquity of super-low-GI fructose in today's food supply - "Sugar is not the problem" must be the low-GI industry's "party line"**. Awkwardly, the University of Sydney low-GI advocates' key mistakes all seem to have been in that direction.

Australian Paradox remains a very disturbing puzzle

So, how do all these things fit together without involving some form of scholarly and scientific negligence or misconduct?

- *Australian Paradox* published in *Nutrients* in April 2011 by Dr Barclay and Professor Brand-Miller, the latter as lead author
- Main claim is a “substantial decline” in sugar consumption “over the past 30 years”, so “an inverse relationship” with obesity
- *Australian Paradox* emerges as menace to public health: <http://www.australianparadox.com/pdf/WHO'S%20CITING%20OZ%20PARADOX.pdf>
- Rory Robertson subjects dud paper to basic scrutiny - just simple fact-checking - and finds analysis is dominated by serious errors
- Basis for authors’ preferred series was discontinued as unreliable by ABS after 1998-99; four valid sugar series trend up not down!
- To what extent was publication assisted by author Professor Brand-Miller wearing a second hat, as "Guest Editor" of *Nutrients*?
- AWB and JBM dismiss critique with false claim that cars are consuming up to 14kg. pp. pa. of raw sugar via ethanol production
- Highly respected journalist Michael Pascoe informs authors that raw sugar is not involved in ethanol production in Australia!
- That eye-popping false ethanol claim provides unmistakable confirmation that this study is lightweight, and sloppy with key facts
- AWB and JBM quietly delete their carefully calibrated false ethanol claim and rush off to publish *Australian Paradox Revisited*
- Authors' spell Robertson's name as "Roberston", and then insist again that Roberston doesn't know what he is talking about
- Yet four of four of the authors’ valid sugar indicators still trend up not down, contradicting their claim of a "substantial decline"!
- And the ABS dataset underlying authors' preferred series still was discontinued as unreliable by ABS more than a decade ago!
- On poor advice from an "adviser", University of Sydney VC Dr Michael Spence vouches for the veracity of deeply flawed paper
- Robertson launches \$40,000 Australian Paradox Challenge, encouraging scientists and/or others to try to prove him mistaken
- After three months, no-one has come forward to claim the cash, and still not even the slightest dent in Robertson’s critique
- AWB and JBM still concede nothing, not even mis-spelling of “Roberston” or the obvious fact that Figure 5A points up not down!
- Authors launch new website designed to maintain lame charade that there are no serious problems in *Australian Paradox* paper
- Authors continue to avoid my eight awkward questions: <http://www.australianparadox.com/pdf/8-QUESTIONS-FOR-AWB-&-JBM-BANNED.pdf>
- University of Sydney has an **undisclosed** conflict of interest: <http://www.australianparadox.com/pdf/Sydney-Uni-conflict-interest-030712.pdf>

Who has a reasonable explanation for all that? Until I hear one, I’ll be arguing near and far that *Australian Paradox* and *Australian Paradox Revisited* **should be corrected by the authors, the journal and/or the University of Sydney via Dr Michael Spence**, starting with the misspelling of “Roberston” and that silly misreading of Figure 5A (“decreased by 10%” rather than “increased by 30%”!). **Full retraction** of the deeply flawed papers may be the only reasonable response in the circumstances. In my opinion, the *Australian Paradox* fiasco has become an academic and public-health disgrace. I have done my best to document the facts as I see them, and urge a serious investigation into this disturbing matter.

Summary: Why the *Australian Paradox* paper matters

- The University of Sydney's *Australian Paradox* paper is dominated by serious errors that reverse its paradoxical (false) conclusion: "an inverse relationship" between the consumption of added sugar and obesity
- These dominating errors – featuring an ABS dataset discontinued as unreliable after 1998-99, alongside the University of Sydney scientists' bizarre misreading of their *own* charts showing obvious upward trends in four valid big-picture indicators of sugar consumption - make the paper **an academic disgrace that should be corrected or retracted**
- Highly respected journalist Michael Pascoe has documented some rather unscholarly behaviour by the University of Sydney scientists, raising the issue of **scientific misconduct**
- Moreover, the University of Sydney's *Australian Paradox* paper has become **a menace to public health**, including by providing a false intellectual basis for the quasi-official endorsement of foods high in added-sugar as healthy
- This is somewhat dangerous given the growing evidence that **fructose** - one-half of added sugar – may be the single-most important driver of global obesity, diabetes and related maladies
- There is also the issue of the University of Sydney's serious but **undisclosed** conflict of interest involving its **Glycemic Index** enterprise (awkwardly, fructose has a super-low GI of 19)
- If University of Sydney Vice-Chancellor Dr Michael Spence – who unwisely has vouched for the veracity of this deeply flawed study – turns out to be unable or unwilling to fix this mess, I'll be urging a cut in the University of Sydney's public research subsidies and a public investigation into this *Australian Paradox* fiasco.