The Australian Paradox

Professor Jennie Brand-Miller and Dr Alan Barclay

The Australian Paradox

There has been debate surrounding a paper "The Australian Paradox" which reported the observation that upward changes in the prevalence of overweight and obesity in Australia run counter to changes in refined sugars intake.

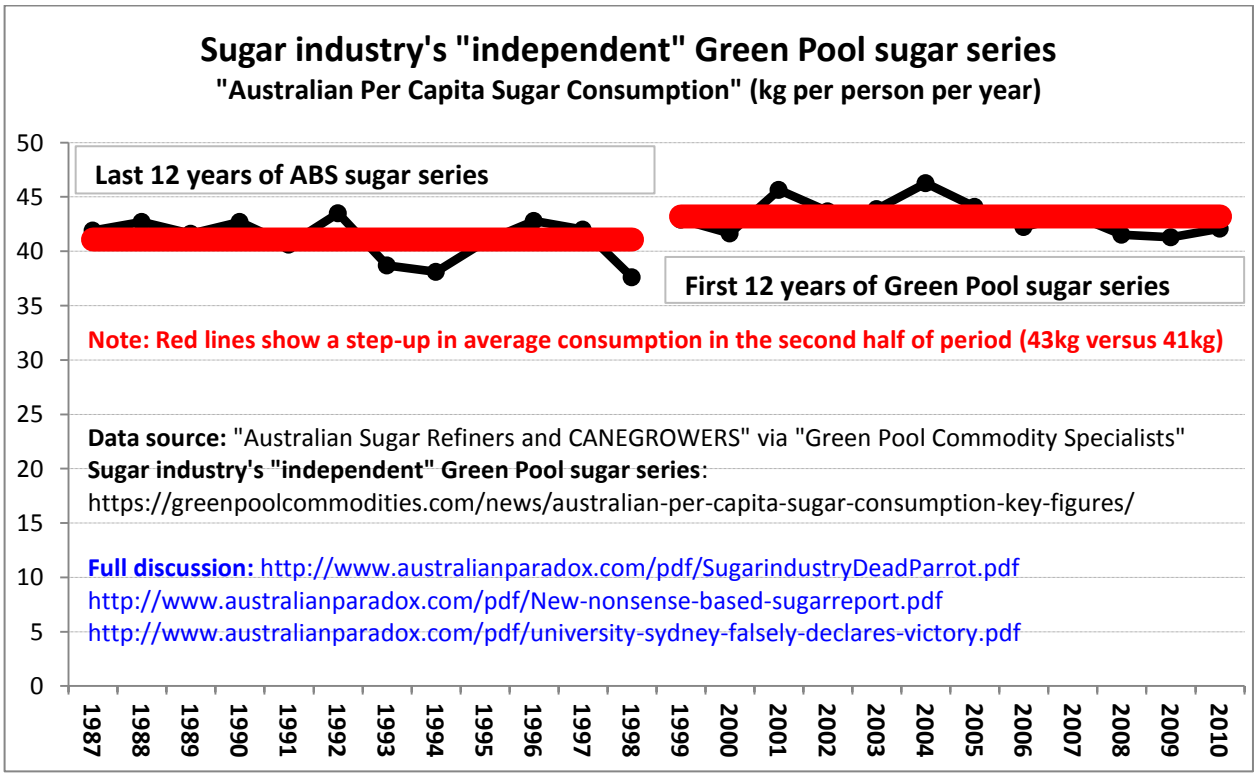
An Australian economist claims there is no Australian Paradox, just unreasonable treatment of the available data. However, in critiquing the Australian Paradox, the economist relies heavily on data from the Australian Bureau of Agricultural and Resource Economics and Sciences. ***Unfortunately, there are factual errors in the economist's arguments, 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 economist also holds an ***erroneous belief*** that the sugar fructose is the primary cause of obesity, despite the existence of very strong evidence that fructose is no more fattening than any other form of carbohydrate when consumed in typical (physiological) amounts as part of a healthy balanced diet.

A detailed response to the economist has been published in the Australian Paradox Revisited paper, and a new ***independent*** review of Australian's [sic] sugar consumption indicates that it is ***still continuing to decline***. ...

Source for all that is a **shonky University of Sydney website**: **http://www.theaustralianparadox.com.au** (on 26 Nov. 2012)

Rory: Yes, that's my ***italicised bolding***. Yes, ***those four claims all are false***, as is demonstrated below. For starters, the chart confirms again that JBM and AWB's claim of "a consistent and substantial decline" in sugar consumption over the 30 years to 2010 is clownish. Moreover, it's a bit slippery for the sugar industry's low-GI business partners to describe its support as "independent"! http://www.logicane.com/Partners (By the way, I'm guessing that Professor Jennie Brand-Miller is starting to regret her choice of Dr Alan Barclay as co-author. This is not her area of expertise. Nor his, it turns out!)



RORY ROBERTSON (Economist and former fattie)

Does chart contradict the claim of "a consistent and substantial decline" in sugar consumption "over the past 30 years"?

Yes, obviously. So, that's another reason why, in my opinion, the Australian Paradox papers – *Australian Paradox* (2011) and *Australian Paradox Revisited* (2012) – have become an **academic disgrace**. In this matter, the authors appear to have (i) **great difficulty in reading simple charts** and (ii) **little respect for key facts**. One fascinating issue for readers to consider is whether this is just a problem involving competence, or something worse. I do not know.

My concerns about the serious errors and misrepresentations in the *Australian Paradox* papers published by the University of Sydney's Dr Alan Barclay and Professor Jennie Brand-Miller are detailed in the material prepared for my participation in the ***Discussion on "The place of sugar in Australia's Dietary Intake Guidelines"* at Parliament House, Canberra - 29 October 2012.** Here's my "Australian Paradox goes to Canberra" slideshow:
http://www.australianparadox.com/pdf/22Slideshowaustraliangoestoparadoxcanberrafinal.pdf

All I'm asking is for the correction or retraction of these supposedly "peer reviewed" published papers. But Dr Alan Barclay and Professor Jennie Brand-Miller **don't like correcting the obvious errors in their papers, preferring to pretend they are flawless**. Indeed, it seems to me our unreliable nutritionists have **one dominating aim: to defend their deeply flawed paper**, and too bad about the facts or damage to the reputations of their bosses and/or the University of Sydney in the process. The authors website – www.theaustralianparadox.com.au - is part of that very determined if unscholarly process.

I've reproduced much of their "Home" page on the previous page, followed by **a quarter-century chart** showing all of the new "Green Pool" series (except 2011) the authors highlight as reliable, "independent" and supportive of their conclusion. Awkwardly for their **misinformed supporters at the University of Sydney**, the Green Pool sugar series does **not** show what Dr Alan Barclay and Professor Jennie Brand-Miller claim it shows: even on their new preferred measure, "Australian's (sic) sugar consumption" is **not** "still continuing to decline".

In fact, the chart shows consumption to be flat-to-up over recent decades. Yes, the University of Sydney's silly claim of "a consistent and substantial decline" in sugar consumption "over the past 30 years" again is contradicted. Alas, the sugar industry's key business associates at the University of Sydney - see Slide 12 in the Canberra chartset above - really are not so good at reading charts.

On top of being an academic disgrace, the *Australian Paradox* papers – falsely claiming as scientific fact "**an inverse relationship**" between the consumption of sugar and obesity – have become **a menace to public health**, as explained below.

One of the more **unsettling aspects** of my dispute with the University of Sydney is the fact that its high-profile nutritionists who published the faulty *Australian Paradox* paper – falsely claiming as scientific fact "**an inverse relationship**" between the consumption of added sugar and obesity – also are food-industry service providers who operate a "low GI" (Glycemic Index) business that collects revenues from endorsing particular brands of (low GI) sugar and sugary products as "healthy": p.10-11 of http://www.gisymbol.com/cmsAdmin/uploads/Glycemic-Index-Foundation-Healthy-Choices-Brochure.pdf

Given the University of Sydney's **deep links** to the sugar and sugary food industries - and the well-documented problems for scientific integrity and public health in earlier times at places including **Harvard University's nutrition science department**: http://www.motherjones.com/environment/2012/10/sugar-industry-lies-campaign - should any of the University of Sydney's nutritionists be allowed to work unsupervised?

Errors aplenty, large and small

In summary, my dispute with the University of Sydney at its core is **not** about science or nutrition, it's about **simple things like up versus down, valid versus invalid and the need to correct serious errors in the public debate**. The *Australian Paradox* paper is wrong on the authors' own published charts.

- Five separate indicators of sugar consumption.
- Four indicators trend **up** not down, while the other was **discontinued as unreliable** by ABS over a decade ago!
- So, what should we conclude? The authors claim – seriously – that the available data show "**a consistent and substantial decline**" in sugar consumption "**over the past 30 years" (to 2010)**, and so "**an inverse relationship**" between the consumption of refined sugar and obesity. Yes, huh? (Slides 13-23 in my chartset above.)
- Amusingly, the authors also claim the "Green Pool" sugar series – in the previous chart - supports their silly story!

Please consider some of Dr Alan Barclay and Professor Jennie Brand-Miller's other "mix ups" below, which range from sloppy to dominating to disturbing.

1. Try this simple calculation: **What is 12,000,000,000 grams** (roughly the claimed reduction in sugar added to Australian softdrinks over the *four years* to 2005-06) **divided by four** (to convert to "per year") **and then divided by 20,000,000** (to convert to "per person" in Australia)? Yes, the answer - as you quickly calculated in your head, after cancelling seven zeros - is **150 grams per person per year**. Yet Dr Alan Barclay and Professor Jennie Brand-Miller

published - in their supposedly "peer reviewed" paper - the figure of "**600 g per person per year**". Yes, they are wrong, this time by a factor of four – but at least on this occasion they got the sign right! (To confirm their error, go to the bottom of p.498 in the PDF at http://www.mdpi.com/journal/nutrients/special_issues/carbohydrates).

2. Disturbingly, here's **a chart with readings for 2000, 2001, 2002 and 2003 despite no real data existing for those years**, because the Australian Bureau of Statistics (ABS) had **discontinued** as unreliable the only real data series after 1998-99. **The conspicuous flat green line** in Slides 21 and 22 screams to competent observers that the ABS had ceased production (http://www.australianparadox.com/pdf/22Slideshowaustraliangoestoparadoxcanberrafinal.pdf).
3. On the way to their fluffy false response - *Australian Paradox Revisited* - to my correct critique, Dr Alan Barclay and Professor Jennie Brand-Miller invented a ridiculous false claim that cars not humans were consuming up to 14kg per person per year of the available sugar via ethanol production. That reckless false made-up claim was based on nothing firm, but it was carefully calibrated to be just large enough to pretend that a particular upward sloping line – one that helps to shred the credibility of their "shonky sugar study" - would point down. Widely respected journalist Michael Pascoe outed the hard-working if unreliable nutritionists' reckless false claim, although they did not subsequently retract their faulty *Australian Paradox* paper, as we had good reason to expect: see Slides 38-40 at http://www.australianparadox.com/pdf/AUSTRALIAN-PARADOX-101-SLIDESHOW.pdf
4. It's fascinating – disturbing? - that the Green Pool sugar series that Professor Jennie Brand-Miller and Dr Alan Barclay now are promoting on their website as **"independent" and reliable is a sugar-industry commissioned, funded and "framed" data series**. Independent indeed! The unreliability and nonsense-based origins of the sugar industry's new Dead Parrot sugar series are discussed at: http://www.australianparadox.com/pdf/SugarindustryDeadParrot.pdf ; http://www.youtube.com/watch?v=CIrBMt4eiRk and http://www.australianparadox.com/pdf/New-nonsense-based-sugarreport.pdf .

In my opinion, the University of Sydney's Professor Jennie Brand-Miller and Dr Alan Barclay **should be instructed by senior management** to correct or retract their obviously false claim of a "consistent and substantial decline" in sugar consumption "over the past 30 years"; so too they should be instructed to formally retract their silly and somewhat dangerous false claim of "an inverse relationship" between sugar consumption and obesity. Eat more sugar, get slimmer! (Slides 8-23 at http://www.australianparadox.com/pdf/22Slideshowaustraliangoestoparadoxcanberrafinal.pdf)

Sugar industry's apparent failed attempted rescue of University of Sydney's underperforming nutritionists is fascinating

In claiming falsely that the sugar-industry commissioned, funded and "framed" Green Pool sugar series is "independent" – yes, "independent" of a scientific paper claiming "an inverse relationship" between the consumption of refined sugar and obesity: eat more sugar, get thinner! – the authors either are keen on **misrepresenting** the sugar-industry source of this nonsense-based series, or it's just another bit of inadvertent confusion, a regular feature in this *Australian Paradox* dispute.

Although ultimately unhelpful, the sugar industry's apparent attempt to rescue the University of Sydney's "shonky sugar study" and its underperforming authors is fascinating. The links between the University and the sugar industry seem strong. Should our public health be worried? (http://www.motherjones.com/environment/2012/10/sugar-industry-lies-campaign)

In any case, it is clear that - even on the preferred "independent" sugar series they now embrace - Professor Jennie Brand-Miller and Dr Alan Barclay's claim that Australians' sugar consumption is "still continuing to decline" is false.

Moreover, that obvious misrepresentation sits alongside the **similarly false claim** on their website - and in *Australian Paradox Revisited* - that I am incompetent on this topic: "Unfortunately, there are factual errors in the economist's arguments, 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".

In fact, Professor Jennie Brand-Miller and Dr Alan Barclay *identified* **no** errors in my correct critique. Importantly, the errors that I correctly identified – including that obvious 600g/150g and ABS/FAO mix-ups above – still remain obvious in their supposedly "peer reviewed" paper. Only the infamous "ethanol mix up" did not make it to print, thanks to Michal Pascoe.

University of Sydney's disturbing undisclosed conflict of interest

For some unknown reason, the University of Sydney Vice-Chancellor, Dr Michael Spence, and Deputy Vice Chancellor (Research), Professor Jill Trewhella, have vouched for the veracity of this deeply flawed *Australian Paradox* paper (see #11 and #19 at www.australianparadox.com). Yet the discussion above - and Slides 8-23 in my Canberra chartset - document a range of serious problems that make a mockery of that support. Put up your hand if you believe the paper was "peer reviewed" by competent and independent analysts. No, me neither. Yet there the faulty paper sits - uncorrected - on the "scientific record".

Again, the paper's obviously false conclusion of declining sugar consumption is driven by **the authors' shonky chart showing readings for 2000, 2001, 2002 and 2003 despite no real data existing for those years**, because the Australian Bureau of

Statistics (ABS) had **discontinued** as unreliable the only real data series after 1998-99. **Again, the conspicuous flat green line** in Slides 21 and 22 screams to competent observers that the ABS had ceased production: http://www.australianparadox.com/pdf/22Slideshowaustraliangoestoparadoxcanberrafinal.pdf

Sorry, Dr Spence and Professor Trewhella, but publishing charts and findings based on data points that do not exist or simply were made up is shonky scholarship; and the defence of such a practice is unworthy of any respectable scientist or University. One wonders why the University is defending a cosy dysfunctional arrangement whereby the influential lead author – who loved the dud paper - and the "Guest Editor" – who oversaw publication – are the same person! Outrageously, Professor Trewella has falsely described this failed quality-control process as "**internationally accepted standard practice**"!

While the University of Sydney – via its senior management's **disingenuous "It's peer-reviewed and published, so get lost"** defence of the "shonky sugar study (http://www.australianparadox.com/pdf/Sept2012-Conversations.pdf) – is arguing that modern doses of sugar consumption are **not** a problem – maybe even a health benefit – there is increasingly clear scientific evidence that added sugar in modern doses **is** a serious health hazard: http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all&_r=0

The University of Sydney so far has refused to acknowledge of correct the false claims (next section) of its underperforming food scientists have injected into the public debate, even though those false claims have been influential in delaying - until at least 2013 - the National Health and Medical Research Council's (NHMRC's) plan to tighten official nutrition advice against sugar: http://www.smh.com.au/national/health/research-causes-stir-over-sugars-role-in-obesity-20120330-1w3e5.html

The University of Sydney's serious **undisclosed "lowGI"/fructose/sugar conflict of interest** is documented on page 3 of http://www.australianparadox.com/pdf/Sept2012-Conversations.pdf . In my opinion, the University of Sydney's response so far to the disturbing issues raised in the Australian Paradox episode has left much to be desired. One possibility is that the University is struggling to balance:

- **its desire to maintain a high standard of academic and scientific integrity in its research; against**
- **its desire to maintain and grow the low-GI enterprise to which its *Australian Paradox* authors are devoted.**

It's a difficult balance and in the end the University of Sydney can do one thing or it can do the other. It cannot do both. I say that the University should simply do what is right. I say that the University of Sydney should correct or retract the deeply flawed and possibly fraudulent *Australian Paradox* papers - which now are both a menace to public health and an academic disgrace – without further unreasonable delay.

I'm left asking: Whatever happened to quality control and integrity in science at the University of Sydney? Shouldn't the authors have been instructed to acknowledge their dominating "ABS/FAO mix up" in the *Nutrients* journal, so that readers across the world are not completely hoaxed on the veracity of the *Australian Paradox* paper? Is the authors' **ongoing omission** of that "FAO/ABS mix-up" from the online journal important or trivial? How much should we make of the authors using *Australian Paradox Revisited* to **falsely represent me as incompetent and my absolutely correct concerns about their crucial "ABS/FAO mix up" as incorrect?** And what about promoting the bogus sugar-industry-funded-and-"framed" Green Pool sugar series as reliable, "independent" and downward sloping in recent decades, when clearly it is not? Isn't the **persistent misrepresentation of key facts** involving a "peer reviewed" paper a serious matter for publicly funded scientists?

Some definitions of Scientific Fraud

- The deliberate misrepresentation of information to promote a conclusion that is not supported by the underlying facts. (My simple definition.)
- "A false representation of a matter of fact - whether by words or by conduct, by false or misleading allegations, or by concealment of what should have been disclosed - that deceives and is intended to deceive..." (http://legal-dictionary.thefreedictionary.com/fraud)
- "A fraud is an intentional deception made for personal gain or to damage another individual" (http://en.wikipedia.org/wiki/Fraud)

While **Dr Rosemary Stanton** would be aghast at me writing her name near those definitions, she has in fact agreed with me about the *Australian Paradox* paper's misrepresentation of the trend in Australian sugar consumption: "And yes, I agree with you [Rory] that **we have no evidence that sugar consumption in Australia has fallen**...I argue this point frequently with colleagues"; "**I have many objections to that particular paper** ..."; and "I have expressed my opinion about the paper to the authors ... I will almost certainly cite it at some stage as an example of **something I consider to be incorrect**" (my bolding; Slide 18 at http://www.australianparadox.com/pdf/22Slideshowaustraliangoestoparadoxcanberrafinal.pdf).

***Australian Paradox* as a menace to public health**

On top the *Australian Paradox* paper being an academic disgrace, in my opinion, the paper - improperly supported by *Australian Paradox Revisited,* the authors' false rejection of my correct critique - also is a menace to public health.

That is, the *Australian Paradox* paper and its spectacularly false conclusion - "an inverse relationship" between (added) sugar consumption and obesity - backed by the University of Sydney's stamp of scientific credibility - have provided a key part of the food industry's intellectual justification for its aggressive opposition to the NHMRC's planned toughening of the Australian Government's national nutrition advice against sugar.

Disturbingly, that aggressive opposition from the sugar and sugary food industries - supported by the University of Sydney's scientific credibility and the University's highest-profile food-industry service providers – apparently has been successful in pushing any finalisation of tougher nutrition advice against added sugar from 2012 into 2013 at the earliest: http://www.smh.com.au/national/health/research-causes-stir-over-sugars-role-in-obesity-20120330-1w3e5.html ; http://www.theaustralian.com.au/news/health-science/a-spoonful-of-sugar-is-not-so-bad/story-e6frg8y6-1226090126776

In my opinion, the University of Sydney and its "shonky sugar study" are tending to damage public health. That's an outrage, and that's why I'm begging the University of Sydney's senior management to do the right thing: please instruct your unreliable nutritionists to correct or retract the public-health menace and academic disgrace that is *Australian Paradox*.

As I noted earlier, my dispute with the University of Sydney actually is not about science or nutrition, it's about simple things like up versus down, valid versus invalid and the need to correct serious errors in the public debate. And above I've demonstrated that the *Australian Paradox* paper is wrong on the authors' own charts: there is no "Australian Paradox", just an idiosyncratic and unreasonable (mis)treatment - and avoidance - of the available data by those who coined the phrase.

But there are heaps of faulty papers with false conclusions published in nutrition science every single year, Dr Rosemary Stanton has assured me. And after seeing what has gone on at the highest levels of nutrition science at the University of Sydney, I have no doubt she is correct. What I argue is that this is not right. The problems need to be fixed. As I argued above, we need to fix the *Australian Paradox* mess because the faulty paper been used as a spearhead for the food industry's campaign for the once-a-decade update of official dietary advice to "stay soft" on sugar. Moreover, the (bogus) scientific observation of "an inverse relationship" between the consumption of sugar and obesity – in a supposedly "peer reviewed" formal paper from high-profile scientists at the prestigious University of Sydney - provides a critical (false) intellectual justification for putting **Heart Foundation *ticks*** and **LowGI *stamps*** on sugary junkfoods and claiming they are "healthy".

What a disgrace. The University of Sydney should hang its head in shame for falsely claiming "an inverse relationship" between the consumption of sugar and obesity - eat more sugar, get leaner - at a time when **there is increasingly clear scientific evidence that added sugar in modern doses is a serious health hazard: http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all&_r=0**

Why refined/added sugar is a key suspect in obesity and diabesity investigations

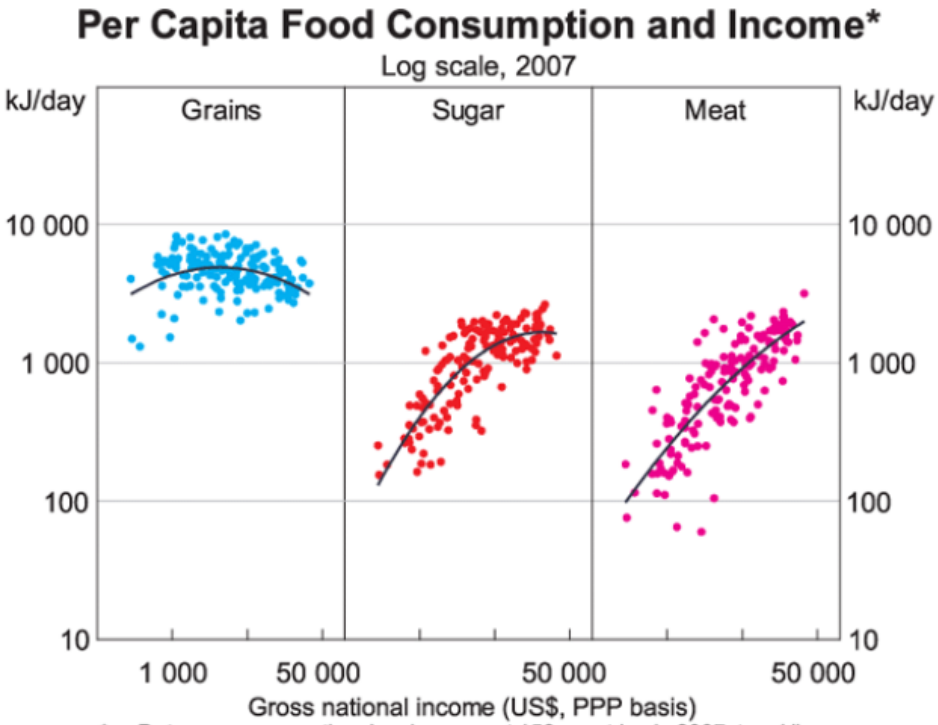
In short, sugar/fructose is a prime suspect as a cause of global "diseases of affluence" such as obesity, diabetes, and heart and kidney diseases (even cancer), because eating heaps more sugar (and meat) is the first thing the global population did as it got richer (see chart overleaf; and thanks for that to the RBA's super-slim economists).

Indeed, in affluent countries, the energy gained by the average human from **refined sugar – a relatively new invention in the multi-million-year history of food for humans** - is right up there with the energy coming from meat! (You would know that for many people sugar consumption is somewhat addictive, whereas meat consumption not so much.)

Does that strike anyone else as bizarre: once-hard-to-find fructose – the bad **half** of refined/added sugar – provides close to half as much energy as meat in affluent societies? Back in the day, you could get fructose mostly only by harassing stingy bees, chasing seasonal fruits and sucking flowers and honey ants. Now you can buy it by the bucket-full at the supermarket for about $2 per kilogram.

Again, critically, there is growing scientific evidence that abundant and cheap refined sugar – via the *Sweet Poison* half that is fructose - is a disaster for public health across the globe: http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all

In my opinion, the pro-carbohydrate foundations of modern "nutrition science" – especially the hapless embrace of refined sugar and other refined carbohydrates as harmless - seem so poorly based that it's not only fascinating and eye-opening but seriously disturbing. On all that, **Gary Taubes's *Good Calories, Bad Calories*** might just be the best book on nutrition science ever written, detailing a history spanning recent centuries. Maybe start with Chapters 23 and 6 to get warmed up.



http://www.rba.gov.au/speeches/2011/sp-ag-101111.html

Professor Jennie Brand-Miller, Dr Alan Barclay and Green Pool all mixed up on "Fructose" then and now

Professor Jennie Brand-Miller and Dr Alan Barclay embarrass themselves in *Australian Paradox Revisited* by arguing that, in fact, "**Fructose Was Not 'Scarce'**" in Australia in pre-European times, arguing that Australians way back then gorged on local delicacies "including sugarbag (bush honey) and dried bush fruits, such as the bush tomato *Solanum centrale* containing 80% sugars" (http://www.australianparadox.com/pdf/nutrients-03-00491-s003.pdf).

Yes, Australians supposedly are eating only about as much fructose today as in pre-European times - before the arrival of comercial sugar-cane plantations and refined sugar, sugary softdrinks and sugar-infused processed food - because back then they gorged all year round on native fruits, nectars and bush honey (p. 4 of 6). Yet in an earlier paper one of the authors observed that traditional Aborigines "…are described as having an exceptional 'sweet tooth" and many early observers commented on the dietary preference for sweet foods. The enthusiastic pursuit of honey [nearly half of it fructose] was said to be out of proportion to the small quantities obtained" (p. 20, of the PDF version of "Australian Aboriginal plant foods: a consideration of their nutritional composition and health implications", Nutrition Research Reviews (1998), 11, 5-23).

So, check out the process of digging up honey ants with *Bush Tucker Man* (first two minutes) at http://www.youtube.com/watch?v=zyLjEqNsxWE . Yep, like the rest of us, traditional Aborigines "adored sweetness", but they struggled to find large amounts of it despite devoting a great deal of time and energy to the search. Of course, traditional Aborigines struggled to find large doses of fructose in the Australian bush because it is not there in any great abundance. Any sizable dose was at best an occasional treat for typical community members.

Meanwhile, back then in Europe, the poor were not really poor because owning honey factories was much more common than you might think: "Apiculture, the art of raising bees, was widely practiced even by the poor. Indeed at certain times in history, consumption of honey may well rivalled (sic) our current consumption of refined sugar" (p. 4). Yes, of course.

That is, the advent of commercial farming of sugar cane, sugar beet and corn – not to mention commercial farming of fruit and honey - probably has only marginally boosted global access to fructose. Sure. Pushing the idea that typical amounts of fructose available to ordinary humans in earlier times were "not scarce" relative to the virtually unlimited quantities available today says much more about the authors' credibility than it says about the real world. [Born in Alice Springs, I spent much of my young life wandering around the bush in NT, SA, Victoria, NSW and Queensland; since going to University in Townsville in the early 1980s, I've spent as much time as possible in the FNQ and NT bush, most recently at www.strathburn.com].

Sorry, but the RBA chart above suggests that Professor Jennie Brand-Miller and Dr Alan Barclay understate the average human's access to fructose – today versus three centuries ago - by many multiples. I challenge Professor Jennie Brand-Miller and Dr Alan Barclay to spend a week fossicking from daylight to dark around Centennial Park – just across the way from the University of Sydney - and report back on their success in seeking the nearly 60 grams of fructose per day on average that the sugar industry says we now are eating. (That is, 59 grams times 365 days times two - to convert from

fructose to refined sugar - equals 43kg per annum, and that's before we start counting the fructose we are consuming from fruit juice, fruit and honey.)

Amusingly, that Green Pool report came across as rather confused in its discussion on the "The Role of Fructose". In particular, I was surprised to learn that "Fructose is not produced in Australia...". That's an awkward error. I wonder if someone will tap the authors of the (commissioned) report on the shoulder and let them in on the "secret" that, in fact, fully 50% of the output – sugar - of the group paying for their rigorous analysis - "Australian sugarcane growers" - is fructose: Section 7 in http://www.australianparadox.com/pdf/New-nonsense-based-sugarreport.pdf

rory robertson

economist and former-fattie

now fairly fructose free!

Comments, criticisms, compliments, whatever are welcome at strathburnstation@gmail.com