

NEW SUGAR REPORT MISLEADS VIA DATA SERIES AND METHODOLOGY ABS DISCONTINUED AS UNRELIABLE

Australians are losing their sweet tooth

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AUSTRALIANS are becoming increasingly sweet on savoury foods, with new data showing we're consuming over 25 per cent less sugar than 60 years ago.

A report shows sugar consumption in 2011 was 42kg per person, down from 57kg per person in 1951 when Australia's sweet tooth was at its sweetest.

*The report - **Sugar Consumption in Australia: A Statistical Update** - also found there has been a sharp nine per cent decline since 2004 when every Australian, on average, was absorbing 46kg of sugar.*

The report, compiled by Green Pool, has taken all aspects of sugar consumption into account. ...

<http://www.news.com.au/lifestyle/health-fitness/australians-are-losing-their-sweet-tooth/story-fneuzkvr-1226488927664#ixzz28Yt6h89H>).

It turns out that one obscure area of strong growth in the Australian economy is the production of misleading reports on sugar consumption! The latest such report - "Sugar Consumption in Australia: A statistical update", produced by consultants Green Pool Commodity Specialists, as commissioned by the "peak body for Australian sugarcane growers" - claims to have carefully and expertly produced a "**robust and accurate**" data series that reveals a decline in per-capita sugar consumption over recent decades (<https://greenpoolcommodities.com/news/sugar-consumption-in-australia-a-statistical-update/>).

On the new report, someone well-informed and somewhat sceptical would **ask the obvious question**, something like: "How did a modest Brisbane firm succeed in the extraordinarily difficult task of counting all the added sugar scattered here, there and everywhere across Australia's food supply, a task so immense that even the Australian Bureau of Statistics (ABS) with thousands of staff and a wealth of counting expertise failed badly, so badly in fact that it had to abandon its methodology as unreliable over a decade ago"?

The answer, of course, is that the new report did no such thing. In fact, the "new" information on Australian sugar consumption is deserving of ridicule, because the methodology used is complete nonsense. Sorry, but it is hard to be anything but scathing.

Like the factually incorrect "Australian Paradox" observation from the University of Sydney last year, this new report is based on an "apparent consumption" of sugar series (4306.0) that was discontinued as unreliable by the ABS a decade ago. In this new report, that same discredited sugar series now has been updated by applying the same broken methodology that

the ABS abandoned as unreliable a decade ago. **How's that for patent nonsense?**

Accordingly, the end result – the sugar industry's Green Pool report - is worse than useless, a nonsense that misleads rather than informs the public debate. Is misleading the public debate with "updated" but still-bogus information just unreasonable or is it completely unacceptable?

In more detail, this sugar-consumption "update" is **fundamentally flawed** because it takes absolutely no account of the critical **why** behind the ABS discontinuing its unreliable sugar series after 1998-99, after some 60 years!

In fact, the ABS's sugar-counting methodology back then was in such disorder that the resulting sugar data could not - and should not - be relied upon for anything important. The puzzle here is that my website is cited by Green Pool (p.13) - and my **discussions with the ABS** about why it discontinued its apparent consumption of sugar series are detailed at #1 on the LHS of www.australianparadox.com (pp. 11-13) - yet the report **simply ignores the basic and unavoidable problems** faced by the ABS and/or anyone else seeking to count the added-sugar scattered throughout our food supply.

But don't take my word for it: the ABS itself provides an **information line** on the cover page of its discontinued "Apparent Consumption of Foodstuffs" dataset - "For further information about these and related statistics, contact Karen Connaughton on Canberra 02 6252 5337" - **for the media and other analysts keen to understand the data issues that led the ABS to conclude that its sugar-counting methodology had - over the decades - become increasingly outdated, overwhelmed and unreliable.**

Contrary to Green Pool's flawed understanding, Canberra still publishes apparent consumption data for easier-to-measure food and drink products, including beef, lamb, pork, chicken, butter, milk, cheese, beer and wine, but **not** for much-harder-to-measure refined sugar (see p 55, http://www.daff.gov.au/data/assets/pdf_file/0011/1910819/food-stats2009-10.pdf and <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4307.0.55.001/>).

The **particularly difficult issues** involved in measuring the refined sugar scattered throughout our food supply are discussed in greater detail below. In short, the ABS's measurement problems intensified over time as refined sugar went from being bought in bags at the grocery store to being bought **already added to many thousands of varieties of manufactured food and drink products.** For example, what should the ABS assume about the sugar content of \$700m worth of "concentrates and beverage base" imported annually by one firm? (Section 4).

As with the University of Sydney's now-discredited *Australian Paradox* "study", we are left to ponder whether this new report - unacceptably based on a data series and a counting methodology both long ago discontinued as unreliable - reflects a serious problem with competence or a disturbing lack of respect for the public debate.

Either way, it is unreasonable to launch flawed and misleading information - in this case a reheated version of the ABS sugar series discontinued as unreliable by the ABS a decade ago, updated by applying the broken methodology abandoned by the ABS as unreliable a decade ago - into the critical debate on obesity and diabetes.

2. BACKGROUND

As you may know, there is a quite heated debate globally about the health consequences of modern levels of sugar consumption. **On one side, there is a growing nucleus of global scientists who see added sugar - one half of which is "fructose", the other "glucose" - as the single-biggest driver of global obesity and diabetes, together as "diabesity" the most serious public-health issue of our times** (<http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all&r=0>).

In Australia, some with businesses involving sugar and sugary products remain keen to tell the story that not only is sugar consumption harmless but "Australians have been eating less and less sugar, and rates of obesity have been increasing" (<http://www.theaustralian.com.au/news/health-science/a-spoonful-of-sugar-is-not-so-bad/story-e6frg8y6-1226090126776>).

Notably, University of Sydney nutritionists and food-industry service providers **Dr Alan Barclay and Professor Jennie Brand-Miller** - who operate a business stamping as "healthy" a variety of low-GI foods, including sugar and many sugary products - published a "peer reviewed" scientific paper in 2011 that claimed to document a "substantial decline in total refined or added sugar consumption by Australians over the past 30 years", and so **"an inverse relationship"** between the consumption of sugar consumption (down) and obesity (up).

Unfortunately, the two University of Sydney's *Australian Paradox* papers contain **eye-popping errors**, including - bizarrely - **mistaking down for up** in their own published charts and also **failing to notice - or deliberately leaving readers and any independent reviewers unaware** - that the FAO (Food and Agriculture Organization) series on which their main findings are based was itself based on that ABS sugar series (4306.0) discontinued as unreliable, for a decade before the original dud paper was published! (**Slides 8-10 and 17** in <http://www.australianparadox.com/pdf/AUSTRALIAN-PARADOX-101-SLIDESHOW.pdf>).

The so-called Australian Paradox does not exist. It's not a paradox; it's not a puzzle; it's just a series of serious errors

published in a journal with little or no quality control. It's a simple case of persistently negligent analysis and/or research misconduct. The authors still have **failed to address** the eye-popping errors: <http://www.australianparadox.com/pdf/8-QUESTIONS-FOR-AWB-&-JBM-BANNED.pdf>

Nor have University of Sydney scientists - or anyone else - collected the cash or activated the public apologies on offer in the **\$40,000 Australian Paradox Challenge** issued to University of Sydney Vice-Chancellor Dr Michael Spence on 7 June: <http://www.australianparadox.com/pdf/SydneyUniVC%20LETTER070612.pdf>

Instead, the University of Sydney is promoting a **disingenuous - "It's peer-reviewed and published, so get lost" - defence** of its discredited *Australian Paradox* papers. 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 (p.10 at <http://www.gisymbol.com/cmsAdmin/uploads/Glycemic-Index-Foundation-Healthy-Choices-Brochure.pdf>).

Disturbingly, the University of Sydney's scientists still have **not explicitly disclosed their serious conflict of interest** in claiming publicly that modern sugar consumption - half of which happens to be **super-low-GI (19) fructose** - is not a health hazard while also operating a business, the prosperity of which depends on the general public continuing to see **super-low-GI (19) fructose** consumption as harmless (p. 3 of <http://www.australianparadox.com/pdf/Sept2012-Conversations.pdf>).

Doesn't the **Australian Code for the Responsible Conduct of Research** require disclosure of conflicts of interest? (Section 7, <http://www.nhmrc.gov.au/files/nhmrc/publications/attachments/r39.pdf>)

This all matters because the University of Sydney authors encourage the use of their false conclusion to shield unhealthy products with added sugar from tougher diet-controls: "The findings challenge the implicit assumption that ... measures to reduce intake of soft drinks will be an effective strategy in global efforts to reduce obesity", and "The concern is that potentially more important determinants of obesity are being overlooked by the current emphasis on sugars and soft drinks" (<http://www.mdpi.com/2072-6643/3/4/491>).

Outrageously, ignoring the dominating errors I had highlighted in their original paper, the authors stretched their bogus conclusion further in *Australian Paradox Revisited*: **"This paradox challenges the view that concentrated sources of sugar, sucrose or fructose are primary players in the genesis of overweight and obesity"** (p. 4 <http://www.australianparadox.com/pdf/nutrients-03-00491-s003.pdf>).

Ironically, the sugar industry's Green Pool report highlights one of the eye-popping errors involved in the *Australian Paradox* paper. From the Executive Summary: "One major problem for anyone looking closely at the issue – from policy makers, industry, health professionals and others – is that the Australian Bureau of Statistics (ABS) ceased publishing their (sic) 'Apparent Consumption of Foodstuffs' data in 1998/99".

Even Bill Shrapnel, Deputy Chairman, University of Sydney Nutrition Research Foundation, has belatedly discovered that same big hole, and inadvertently declared *Australian Paradox's* main finding invalid: "So, any suggestion that sugar consumption had continued to fall from 2000 could not be supported" (Slide 26 in <http://www.australianparadox.com/pdf/AUSTRALIAN-PARADOX-101-SLIDESHOW.pdf>).

Yes, Bill, that's a key reason why I've been arguing near and far for your underperforming colleagues to correct or retract their bogus *Australian Paradox* conclusion, based as it is on a series that had been discontinued as unreliable for a decade before the now-discredited paper's publication! Moreover, the silly false conclusion of a "substantial decline" is contradicted by **four** other indicators of sugar consumption that trend **up** not down, each based on valid data and all sitting **unacknowledged** in the authors' own published charts (see Slides 9-20, 23-28 and 36-44 in my Slideshow link above).

3. NEW NONSENSE-BASED REPORT IS A CLASSIC CASE OF "GARBAGE IN, GARBAGE OUT"

The obvious problem with the new report is that it is dominated by a classic case of "Garbage in, garbage out". That's harsh but accurate: as noted, the ABS discontinued as unreliable its apparent consumption of sugar series a decade ago. Yes, discontinued as unreliable, after 60 years! Thus both the discontinued data series and the abandoned counting methodology are flawed, faulty, unreliable, and not to be relied upon!

The ABS judged it had little or no ability - given available resources - to count sugar imports or total consumption with any acceptable degree of accuracy. And this particular problem with the reliability of the sugar count had been an issue for many years, perhaps a decade or three. Recall again that various agencies in Canberra today still publish apparent consumption data for easier-to-measure food and drink products, including beef, lamb, pork, chicken, butter, milk, cheese, beer and wine, but **not** much-harder-to-measure refined sugar.

Clearly, the brain-dead updating of an unreliable sugar series by applying the same broken methodology that forced it to be abandoned in the first place - and then claiming the end result as "robust and accurate" information - does not help the public debate, but rather misleads it. **This is a very basic point, and a rather uncontroversial one, I would hope. So while Green Pool report embraces the discontinued ABS**

dataset without comment (p. 3) the methodology clearly is nonsense, so too the shiny and bogus "new" sugar series launched onto the unsuspecting public.

In the authors' own words: "**By applying the same methodology and data sources, trusted [No!] by the ABS from 1938 to 1999**, we hope this Report will provide the most up-to-date, reliable and trusted reference for domestic sugar consumption statistics moving forward" (p. 2; my bolding).

Unfortunately, that cannot happen, because the new series is **worse than useless**, attempting as it does to breathe life into dead series long ago deliberately abandoned and buried. Again, this updated version of the dead series that was discontinued as unreliable misleads rather than informs. Is anyone unclear on the point I am trying to make!

According to Green Pool, "**Virtually all factors have largely been left as per ABS calculation**, since an update of all data would require **a large scale study** of both the composition of imports of food into Australia and representative food compositional data for imports and exports of all categories - which is no longer collected by ABS" (p. 14; my emphasis).

Exactly. So that brain-dead replication of the ABS's abandoned methodology is why the new paper has no credibility. Yes, "an update of all data would require a large scale study of both the composition of imports of food into Australia and representative food compositional data for imports and exports of all categories". Something like that is what the ABS concluded from its **major feasibility study a decade or so ago**, before it chose to stop pretending it could - given limited resources - measure reliably the added sugar scattered here, there and everywhere in our food supply.

No amount of ignoring these critical and unavoidable measurement problems makes them any less important. Even the ABS with its thousands of staff and long counting experience had insufficient resources to do the counting job properly, so it was **always unlikely** that a modest private firm - with not the slightest hint of a **comparative advantage** over the ABS in counting the added sugar now almost-omnipresent in our food supply - could produce anything useful in terms of reliable new sugar-consumption information spanning several decades. And, unsurprisingly, it did not.

To some extent, we can let Green Pool "off the hook" because its "**terms of reference**" seem to have been fundamentally flawed: "In the absence of ABS collating such data, the Australian Sugar Refiners and CANEGROWERS [the industry's peak body] have commissioned an independent analysis by Green Pool Commodity Specialists (Green Pool) to **publish an updated set of statistics on sugar consumption in Australia using ABS methodology...**" (<https://greenpoolcommodities.com/news/sugar-consumption-in-australia-a-statistical-update/>).

That is, Green Pool did exactly what it was paid to do. It was paid to update the data series that the ABS had abandoned as unreliable after 1998-99, after being **instructed specifically** to apply the outdated and broken methodology that the ABS had abandoned as unreliable. **Put another way, Green Pool seems to have been sent on a fool's errand, whether it understood it or not.**

Critically, Green Pool was not paid to start afresh, to begin with an analysis of **why**, or the **significance** of the ABS discontinuing an important data series after 60 years. It was not paid to tell the world that the ABS abandoned the field because it felt that producing a reliable measure of apparent consumption of (added) sugar was beyond its capability at any likely level of funding and resources.

No, Green Pool was given the fool's errand of dragging out a discredited series that had been discontinued as unreliable and updating it, by applying the broken methodology that the ABS had abandoned as unreliable. And so it did. It's complete nonsense, of course, but otherwise a job well done. Yep, it's a classic case of "garbage in, garbage out".

Again, as with the University of Sydney's *Australian Paradox* "study", we are left to ponder whether this new nonsense-based report reflects a **problem of competence**, because key facts have (again) been ignored, or a **disturbing lack of respect** for the public debate, with important facts deliberately put to one side.

Either way, it is unreasonable to launch misleading information - in this case an updated version of a deeply flawed sugar series, specifically updated using a broken counting methodology long ago abandoned as unreliable by the ABS - into the critical public debate on obesity and diabetes.

4. WHAT'S MISSING? AN UNDERSTANDING OF WHY THE ABS STOPPED COUNTING ADDED SUGAR

In my opinion, the important bit **missing** from both Green Pool's "update" and the earlier *Australian Paradox* "study" is **simple common sense alongside an obvious determination to get at the relevant facts.**

In both cases, the obvious first question that needed to be asked was uncomplicated: **Why** did the ABS discontinue its apparent consumption of sugar series after 60 years? After all, discontinuing a data series after over half a century is rather unusual, especially when the information was getting more useful rather than less useful.

On that, it's worth noting again that data-collection agencies in Canberra today continue to publish apparent consumption data for **easier-to-measure food and drink products**, including beef, lamb, pork, chicken, butter, milk, cheese, beer and wine, but **not** much-harder-to-measure sugar.

Now, the ABS obviously didn't give up counting sugar after 1998-99 because it couldn't find any. Importantly, the ABS stopped publishing figures on sugar because there was a **particular problem** with the reliability of the sugar-counting methodology. As noted above, **the ABS's measurement problems intensified over time as refined sugar went from being bought in bags from the local grocery store, to being bought already added to many thousands of varieties of manufactured/processed food and drink products.**

The ABS chose to "bite the bullet" and discontinue ABS 4306.0 in part because it judged its sugar counts had understated the true figures, reflecting the growing difficulty in keeping track of the added sugar scattered throughout our food supply.

How much added sugar did you eat last year? No idea? The core difficulty faced by the ABS in trying to quantify sugar consumption back then was broadly the same as that faced by those of us trying to avoid added sugar today: it's in places you almost wouldn't think to look.

Beyond counting the added-sugar content of **imported** softdrinks, fruit drinks, flavoured milk, sports drinks, energy drinks, canned fruits, vegetables and meats, soups, jams, pies, cakes, biscuits, buns, slices, muffins, chocolates, lollies, ice cream, and other desserts, the ABS also would have to be diligent counting the portions of sugar in myriad breads, pizza, muesli and other "health" bars, yoghurts, sauces, salad dressings, mayonnaises, baby or toddler foods, otherwise processed fruits, vegetables and meats, and other assorted manufactured food products, including especially breakfast cereals.

The ABS then would simply multiply the **proportion** of sugar in each product by the **weight** of each of those **tens of thousands of varieties of product**. After that, all it would need to do is multiply that amount of sugar in each particular variety of product by the **total number sold** of each of those tens of thousands of varieties. That's all!!! I'm not sure many people have a clue how massive a task that would be.

As noted above, the ABS a decade ago simply abandoned the field after concluding a **major feasibility study** that suggested it was next to impossible - given likely resources - to accurately gauge the total amount of refined sugar already mixed into the tens of thousands of varieties of food and drink **imports**.

In particular, the ABS struggled to know how much added sugar was contained in the rapidly growing product varieties lumped into official groupings like bakery products, confectionery, soft-drinks, cordial and syrup, processed fruit and vegetables, and "other processed foods" (Slide 20 in <http://www.australianparadox.com/pdf/AUSTRALIAN-PARADOX-101-SLIDESHOW.pdf>).

As an **example** of the difficulty of the measurement issues involved, how much sugar, if any, should the ABS or anyone else assume is in the \$700m worth of "**concentrates and**

beverage base" imported annually by one firm that sells sugary softdrinks and other beverages in Australia? (Note 32 and footnotes 3 and 4 on page 84 of 96 in <http://ccamatil.com/InvestorRelations/Documents/CCA%202010%20annual%20report.pdf>)

With a growing lack of confidence in its estimates of total sugar imports generated using its increasingly outdated, overwhelmed and unreliable counting methodologies - and lacking the prospect of ever having sufficient resources to produce reliable estimates in the future - **the ABS eventually gave up even pretending to count**, because it did not want to mislead the public with its increasingly unreliable sugar series.

It would be good if others had such reasonable concern for the quality of information in the public domain. In any case, as noted earlier, the ABS provides an **information line** on the cover page of its discontinued dataset - "For further information about these and related statistics, contact Karen Connaughton on Canberra 02 6252 5337" - for those keen to better understand **why** the ABS concluded that its sugar-counting methodology had over the decades become increasingly outdated, overwhelmed and unreliable.

5. SORRY, BUT IT'S UNREASONABLE TO INJECT UNRELIABLE INFORMATION INTO PUBLIC-HEALTH DEBATES

Green Pool concludes: "We believe this Report fills a significant void that has appeared since the ABS ceased publishing the 'Apparent Consumption of Foodstuffs' data in 1998/99. Since this time, no robust, independent assessment of apparent food consumption, at a national level, has been available for policy makers, health professionals, industry and others – including for sugar consumption". (Oops, that last bit is an accidental poke in the eye for Dr Barclay, Professor Brand-Miller and their bogus *Australian Paradox* conclusion.)

And: "The fact that no Australian government agency currently collates and publishes apparent consumption data for products including [difficult-to-measure added] sugar [but not including easier-to-measure beef, lamb, pork, chicken, butter, milk, cheese, beer and wine] is regrettable. It leaves a void for industry, which will always be open to accusations of attempting to portray data trends to its advantage. Green Pool's report is an independent expert report, and it is intended that this report be published in an appropriate economics or health economics journal and be subject to normal publication scrutiny."

Again, the ABS had very good reasons to stop even pretending to measure sugar consumption. **On Green Pool's plan to formally publish its bogus sugar series, my advice is to forget it: just make sure the invoice is paid and move on quickly.**

As I may have mentioned, the methodology is nonsense, based as it is on the brain-dead reheating of a sugar series that was discontinued as unreliable by the ABS a decade ago, and updated using a broken methodology abandoned as unreliable

by the ABS a decade ago. Accordingly, the report is **worse than useless, a nonsense that misleads rather than informs the public debate.**

If Green Pool is determined to "publish", I suggest it **make a bee-line for the little-respected pay-as-you-publish E-journal *Nutrients***, the journal that published both *Australian Paradox* and *Australian Paradox Revisited* despite serious errors that invalidated their main conclusion of "an inverse relationship" between (added) sugar and obesity (see <http://www.australianparadox.com/pdf/TimeforNeweditor24052012.pdf> and Slides 8-10 and 17 in my Slideshow).

Like most, I'm all for new research into this and other related public-health matters. Unfortunately, the critical fact in this matter - apparently given **zero weight** by Green Pool, so too by the underperforming University of Sydney scientists last year, and most recently by the University's Bill Shrapnel - is the fact that the ABS's apparent consumption of sugar series was discontinued as unreliable a decade ago.

So, again, it's hard to be anything but scathing. Green Pool's claim to have produced a "**robust and accurate**" new series is bogus. One **lame analogy** is that Green Pool has taken the broken-down Old Grey Mare (she still ain't what she used to be), given her a glossy paint job and now is attempting to pass her off to the plebs as **Black Caviar!**

Sorry, but the basis of the new report is invalid, and so the report itself is complete nonsense. The idea that "this Report will provide the most up-to-date, reliable and trusted reference for domestic sugar consumption statistics moving forward" is farcical.

Talk about the debate on obesity and diabetes suffering from a misinformation overload. First, the University of Sydney's now-discredited *Australian Paradox* paper, and now this nonsense Green Pool report parading its bogus sugar series as the Black Caviar of Australian sugar facts.

Of course, there is no point in calling for the correction or retraction of this bogus new report, because the private sector is free to mislead the public debate if that is how the cookie crumbles. By contrast, publicly funded academics and universities - including **the University of Sydney, funded as it is by Australian taxpayers** - should be held to the higher but hardly unreasonable standard of quickly correcting serious factual errors that work to mislead the public debate.

6. UNIVERSITY OF SYDNEY EMBRACES BOGUS SUGAR SERIES, DECLARES VICTORY IN AUSTRALIAN PARADOX DISPUTE

Two of Australia's highest-profile nutritionists and food-industry service providers – University of Sydney Professor Jennie Brand-Miller and Deputy Chairman of its Nutrition Research Foundation, Bill Shrapnel - have argued strongly that the Australian Government's **national nutrition guidelines** should **not** be toughened against foods and drinks containing

added sugar (<http://www.theaustralian.com.au/news/health-science/a-spoonful-of-sugar-is-not-so-bad/story-e6frg8y6-1226090126776>).

Spearheading the University of Sydney's and the food industry's campaigns for official advice against sugar to "stay soft" has been the **now-discredited Australian Paradox** paper and its clearly false "scientific observation" of "**an inverse relationship**" between sugar consumption and obesity. That is, eat more sugar and get leaner! Yeah, right (<http://www.smh.com.au/national/health/research-causes-stir-over-sugars-role-in-obesity-20120330-1w3e5.html>).

As a growing number of serious observers are aware, my *Australian Paradox* dispute with the University of Sydney's scientists is not about nutrition or science. As an experienced economist, I'm not so silly as to tackle scientists on their own home ground! In fact, the dispute is **purely empirical**, about simple stuff like up versus down, and valid versus invalid datasets, as well as the need to correct serious errors. At the heart of this dispute is the need to preserve the integrity of the scientific record, and to ensure that important public debates remain fact-based.

To recap briefly, Australia's highest-profile nutrition scientists published a hopelessly faulty assessment of the available data on Australian sugar consumption, and then embarrassed themselves further by claiming that our cars not humans have been eating a big chunk of the extra sugar, via ethanol production! (Slides 38-40 in <http://www.australianparadox.com/pdf/AUSTRALIAN-PARADOX-101-SLIDESHOW.pdf>).

Disturbingly, the scientists' main conclusions – like those of the new Green Pool "update" on sugar - are based on a ABS dataset and counting methodology that were discontinued as unreliable by the ABS over a decade ago. Moreover, the silly false conclusion of a "substantial decline" is contradicted by **four** other sugar indicators trending **up** not down in the relevant timeframe, each based on valid data and all sitting **unacknowledged** in the authors' own published charts (see Slides 9-20 in the Slideshow above).

For many older observers, of course, the claim of a substantial decline in sugar consumption "over the past 30 years" always was a bit of a joke; after all, we remember what the insides of our grocery stores, cafes/convenience stores and service stations looked like circa 1980 before they were filled with today's extraordinary variety of local and imported foods and drinks infused with heaps of added sugar/fructose.

With the *Australian Paradox* paper(s) now thoroughly discredited – and so the campaign to stop Canberra toughening its official nutrition advice against sugar stalled - **the sugar industry recently responded with this new Green Pool report to retrieve the situation.**

Notwithstanding my view that the Green Pool report is worse than useless and should not be taken seriously by serious participants in the current debate, **I was not shocked to find that the University of Sydney embraced it warmly and uncritically at the earliest opportunity.**

In particular, the Deputy Chairman of the University of Sydney's Nutrition Research Foundation, Mr Bill Shrapnel (see Slide 6 in my Slideshow), quickly embraced the bogus "new" sugar information, presented me as a crank and then declared victory in the *Australian Paradox* dispute for the University of Sydney (<http://scepticalnutritionist.com.au/?p=514>).

I have responded in detail to the University of Sydney's self-serving and rather unwise mistaken declaration of victory in the *Australian Paradox* dispute, at #21 on the LHS of www.australianparadox.com .

By contrast, neither *Australian Paradox's* authors, the journal *Nutrients*, Mr Bill Shrapnel nor the University of Sydney's senior management have at any point provided a credible defence of the **eye-popping errors** documented in my Slides 8-10, 17 and 36 (as there is no credible defence; <http://www.australianparadox.com/pdf/AUSTRALIAN-PARADOX-101-SLIDESHOW.pdf>).

That's why I'm arguing near and far for the faulty *Australian Paradox* paper's correction or retraction.

7. GREEN POOL CONFUSED ON "THE ROLE OF FRUCTOSE"?

Yes, I've argued above that Green Pool's "new" sugar dataset is worse than useless. And perusing other aspects of the report does not greatly boost perceptions of its overall credibility. It is true that the report is professional looking - with lots of numbers that add up, and plenty of good charts - but check out the discussion I've "cut and pasted" below.

Instead of "fructose" alone, does Green Pool actually mean "High Fructose Corn Syrup" (55% fructose and 45% glucose), which, like sucrose (50/50), **is a mix of fructose and glucose? Maybe I'm misreading, but is Green Pool really - completely! - unaware that refined cane sugar - sucrose - actually is one half fructose? Try this for size:**

"11. The Role of Fructose

*Fructose is often mentioned in the public debate on diet as being a "new health problem", and its usage "increasing rapidly in the average diet". [Where can we view an example of the latter quote?] **Sugar (sucrose) and fructose are also often confused, and critics often use the words sugar and fructose interchangeably.** Quite a lot of the recent diet literature has come from, and been influenced by, US dietary trends, raising issues as to the relevance for any discussion of sweetener usage in Australia.*

Australia is different to the US. In the US, consumption of sugar (sucrose) and fructose has been for some years about 50/50 in the average US diet (fructose consumption has fallen in the past 4-5 years). For example, in 2001 in the US, sugar accounted for around 29.3 kg/capita, while fructose (both High Fructose Corn Syrup or HFCS, and crystalline fructose) accounted for 28.4 kg/capita for a total of 57.7 kg/capita (1st graph). The US produces fructose from corn, and uses the liquid form – HFCS – almost exclusively in its soft drink industry instead of sugar. The 2nd graph opposite shows that total sweetener consumption in the US is currently just under 60 kg/capita, with sugar and fructose supplemented by glucose and some dextrose.

Fructose is not produced in Australia (at least no current producers were found – there was one producer for a short time in the 1990s, but they [sic] no longer produce fructose). If it is, as claimed, in most products on the supermarket shelf, then logically, any food producer in Australia would have to import it. ABS data records only around 3,000 tonnes of crystalline fructose (and negligible HFCS) currently being imported into Australia (see 3rd graph) – or around 0.13 kg per person per year. **Of course, there is fructose in some imported products as a food ingredient, but anecdotally, it seems a lot less than the significant quantities implied by critics.** ..." (p. 10, my bolding; https://greenpoolcommodities.com/files/8113/4932/3223/12_1004_Sugar_Consumption_in_Australia_-_A_Statistical_Update_-_Public_Release_Document.pdf).

I shouldn't laugh, but Green Pool seems to think it has stumbled onto a puzzle: "logically", if it's not imported, where does all that fructose come from that critics say is sitting on Australian supermarket shelves? Perhaps it comes from the obvious place: from the fructose half of refined cane sugar!

Is it just me, or does that section read as though the authors think that fructose and sucrose are completely different things, as though the cane sugar (sucrose) we eat in Australia has nothing to do with fructose, even though the latter is 50% of the former! Which is why some analysts - including me - often write "sugar/fructose", because the focus is on the "sweet poison" half of sugar – fructose - while the glucose half is assumed to be uninteresting (a benign energy source).

Were you surprised to learn that "Fructose is not produced in Australia..."? That's an awkward error. I wonder if someone will tap the authors of this (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**, and that a chunk of that domestic fructose now sits inside those "products on the supermarket shelves", alongside the myriad imports also with sugar/fructose already added.

What are we to make of this section on "The Role of Fructose"? Is it really as uncomprehending as it seems to me? Will the sugar industry ask Green Pool for its money back?

8. SUMMARY: TREND IN SUGAR CONSUMPTION CRITICAL FOR UNIVERSITY OF SYDNEY'S ACADEMIC INTEGRITY, BUT NOT FOR UNDERSTANDING SUGAR, OBESITY AND DIABETES

The University of Sydney's deeply flawed *Australian Paradox* paper seems to have its origins in its authors' misguided effort to blow "David Gillespie's hypothesis out of the window (sic)" (<http://www.smh.com.au/lifestyle/diet-and-fitness/how-hard-can-it-be-to-cut-sugar-20100630-zmvt.html>).

Incidental or not, Gillespie's big-selling *Sweet Poison* books competes in the same book market as the *Australian Paradox* authors' low-GI diet books.

As I wrote in my very first substantial piece on this issue way back in March, beyond their negligent misreading of the available information on sugar consumption, **there are several further problems with Dr Barclay and Professor Brand-Miller's excessive enthusiasm in falsely claiming a substantial decline in sugar consumption.**

First, even if the story were correct, it wouldn't prove anything. David Gillespie himself has rubbished the University of Sydney's focus on trends in aggregate consumption:

...No one is suggesting that sugar consumption today results in instantaneous population-wide obesity. The science says that (one of the ways) fructose makes us fat is by interfering with our appetite control over decades of continuous consumption. The cumulative effect of this is steadily increasing weight and concurrent metabolic dysfunction (which make us prone to Type II Diabetes and Heart Disease)... The increase in obesity statistics we are seeing now is likely to be a result of the appetite disruption [dysfunction?] (caused by sugar) between the Second World War (or even earlier) and now. So comparing today's obesity statistics with today's consumption is a pointless academic folly (even if it were accurate)... (<http://www.raisin-hell.com/2011/02/heart-foundation-says-sugar-isnt.html>)

Second, Dr Barclay and Professor Brand-Miller tried in *Australian Paradox Revisited* to make the (false) claim that **fructose in history was never "scarce", and that Australians' fructose intake today is little different from levels in pre-European times** (p. 4). Yet it seems obvious that current levels of fructose consumption are unnaturally high (<http://www.australianparadox.com/pdf/nutrients-03-00491-s003.pdf>).

After all, Australians' fructose consumption today is boosted by the commercial farming of sugar cane, fruits and honey alongside imports of sugary foods and drinks (Slides 20 and 48). With average consumption in the ballpark of 20-30kg – half of (say) 40-60kg worth of sugar - typical humans today in affluent countries are eating maybe (at least?) 10 times more fructose – year after year, decade after decade - than was typical during the millions of years over which the human body evolved.

Yes, what nature made scarce, humans have made abundant, cheap and somewhat unavoidable. Here's a cross-check: wandering around Centennial Park in Sydney, could you find 75g of naturally occurring fructose a day, every day for year?

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 one of the things the global population did as it got richer; see chart at <http://www.australianparadox.com/part-2>

Third, estimates of trends in per-capita sugar consumption "were never going to be the last word on whether or not sugar is behind the global obesity epidemic". Indeed, even a series showing exact estimates of per-capita fructose consumption over time – pretty well impossible - wouldn't actually answer the question of most interest: **does removing fructose from the diet of fatties put obesity into reverse?** (Ask Peter FitzSimons; <http://au.news.yahoo.com/sunday-night/features/article/-/13058226/fitzys-sugar-coating/>).

What matters is not per-capita sugar consumption but the distribution of consumption and the period of years and decades over which it occurs. After all, many of us have been eating way more than our fair share for decades. If "the average" Australian is eating (say) 20-25kg of fructose each year, then there'll be plenty of others (like me before) sucking down 30-40kg, while others are eating little (like me now).

Rather than trying to measure average fructose consumption (per person per annum), a more useful approach would be to **start taking a careful look at the food choices being made by Mr and Mrs Shopping Trolley and the rest of the "great unwashed"**. Simply tracking exactly what fatties and emerging fatties are eating would open plenty of eyes to the basic facts. **You can bet that ageing sugar-hogs who don't exercise like demons typically are getting fat!**

A clear indication of the dangers involved can be seen with the example of the **aged and caged Rhesus monkeys** in one study getting fat and diabetic within a 6-12 months of starting to suck down 75g per day the sweet stuff. And they're just the tip of a global iceberg - Hello China and India! (<http://onlinelibrary.wiley.com/doi/10.1111/j.1752-8062.2011.00298.x/abstract>).

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What I know for sure is that my sugar/fructose intake was "elevated" in the decade in which I trended towards obesity. Then I got a clue, and the removal of sugar/fructose from my diet reversed that trend. **For me, the profound insight was that added sugar does something BAD to appetite control.** Something similar also was a feature for David Gillespie and thousands of his followers. (Note that much of this Section 8 was taken directly from pp. 19-20 in <http://www.australianparadox.com/pdf/DitchingSugar27032012.pdf>).

In closing, it's worth noting that the University of Sydney - having obviously lost the argument about whether or not the discredited *Australian Paradox* papers contain serious errors that should be corrected - now is seeking to "shift the goal posts". In particular, Bill Shrapnel has begun highlighting results from next year's "Australian Health Survey" as somehow relevant to this *Australian Paradox* dispute, so too "an analysis of soft drink consumption (or sales?) that is being undertaken. ...Another piece of the puzzle".

Sorry, Bill, but there's no puzzle, let alone a "Paradox"; it's just a series of serious errors published in a journal with little or no quality control. None of what is published in the future will change one bit your colleagues' negligent assessment of the available data in their dud *Australian Paradox* papers. That is, there never was an "Australian Paradox" in the link between sugar and obesity, just an idiosyncratic and unreasonable assessment - and avoidance - of the available data by the University of Sydney low-GI advocates who coined the phrase.

Finally, I want to assure readers that what I have written above is my honest assessment of the relevant facts. If this piece comes across as a bit of a rant, then it is a rant bred of frustration, a frustration that simple but critical facts are being ignored and the public debate misled.

Readers, please be very critical of my commentary – shoot me an email or rubbish my analysis publicly - if you think what I have written above or elsewhere is factually incorrect or unreasonable. (I think not.) Otherwise, perhaps forward this piece to any colleagues, friends or family who may find it interesting.