

Rory Robertson
Sydney, Australia,
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REPLY TO UNIVERSITY OF SYDNEY: QUALITY CONTROL, CONFLICT OF INTEREST, \$40,000 CHALLENGE

Dear Dr Spence, Vice-Chancellor of the University of Sydney, and outside observers

Thank you for your brief initial reply (28 May) on the problem of the University of Sydney's high-profile scientists publishing - and failing to correct - factually incorrect conclusions on the causes of Australia's obesity epidemic. In response to my letter of 24 May, you wrote, in full:

"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".

Dr Spence, that makes it three out of three for me: the authors, the journal and now the University all have decided to simply bat away my concerns, chosen unreasonably not to correct the public record on *Australian Paradox's* factually incorrect conclusions. It's unsurprising I guess that a university supports its scientists, a journal supports its authors, and that underperforming authors pretend there is no problem, simply hoping the issue goes away. But there's a major issue at stake in this **growing public-health controversy**, so I feel it is my civic duty to try to do a better job of explaining the situation more clearly; to try to do a better job of convincing you and your colleagues - and other observers involved both indirectly and directly in public-health matters - that the public record should be corrected.

To begin, I must say that I found your response (above) somewhat surprising because one of the main questions I have been asking in recent months is: **"Whatever happened to quality control at the University of Sydney?"** In your brief reply, you effectively have stated that in this case quality control has been contracted out to the pay-for-publication E-journal *Nutrients*. And yet in my previous letter, I had documented in rigorous if long-winded detail the fact that ***Nutrients'* peer-review process in this case was either non-existent or incompetent** (<http://www.australianparadox.com/pdf/NutrientsLETTER240512.pdf>).

With the University of Sydney having made a substantial long-term investment in its particular approach to nutrition - **the "Low-GI school" - and in its growing Low-GI industry** (<http://www.glycemicindex.com/>), I sense that coming to agreement on the appropriate remedial action in this awkward situation will not be easy. I hope that you will accept that what follows is my sincere assessment of the situation, even if, perhaps, you do not agree with my analysis. Respectfully, I apologise in advance for any problems with "tone", as I am a bit cranky that the authors, the journal and now the University have treated my serious concerns with scant regard.

So, the point of this letter is to bring into sharper focus **the issues of academic quality control, the importance and drivers of the global obesity and diabetes epidemics, and your low-GI researchers' serious but undisclosed conflict of interest in dealing with sugar - specifically super-low-GI "fructose"**, the sweet but dangerous half of table sugar. In the final section, I issue a **genuine \$40,000 cash challenge** to the University of Sydney - indeed, to any enthusiastic observer of this dispute - to prove that my critique of *Australian Paradox* is wrong. I assure you, Dr Spence that my analysis is correct and challenge your scores of fine scientists to show otherwise. Actually, I reckon if they take the time to look at the evidence, they will agree with me.

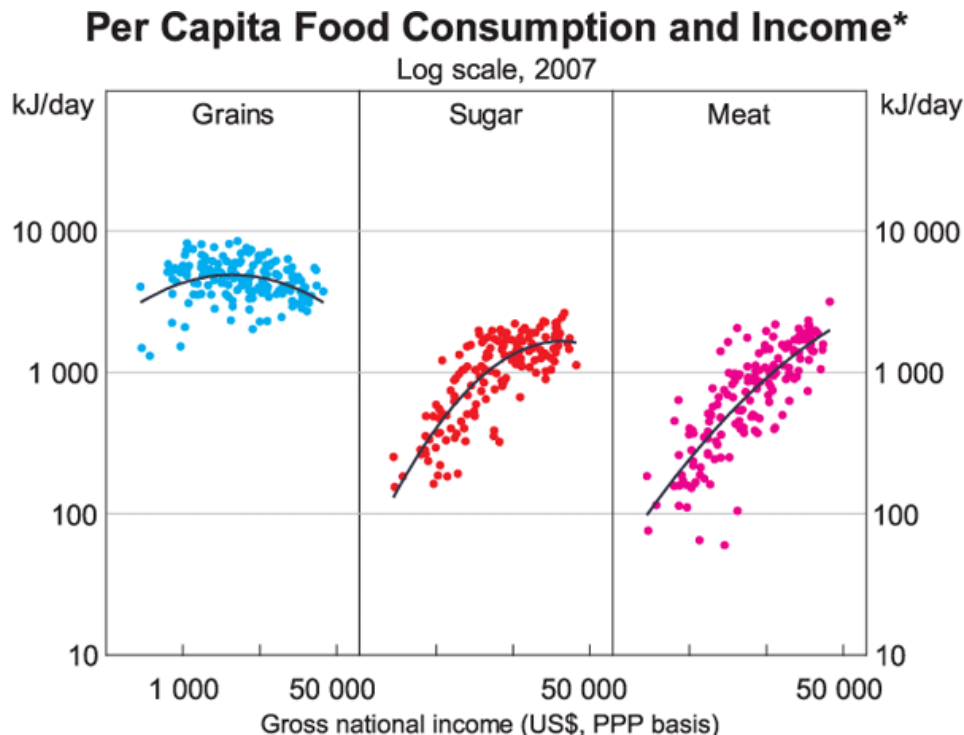
As noted over recent months, the **University of Sydney's embarrassing problem** remains that dominating errors in *Australian Paradox* invalidate both its conclusion and its extended title: "**A Substantial Decline in Sugars Intake over the Same Timeframe that Overweight and Obesity Have Increased**". That is, the available data suggest the trend in sugar consumption has been up not down, and "**sugar up, obesity up**" is **not even a puzzle, let alone a paradox**. It's what most of us thought in the first place. Thus, there is no "Australian Paradox" in the link between sugar and obesity, just an idiosyncratic and unreasonable assessment - and avoidance - of the available data by those who coined the phrase.

Dr Spence, the **only real paradox** with *Australian Paradox* is why what your nutritionists are saying – sugar consumption has declined "over the past 30 years" - is the **opposite** of what their *own* valid charts are saying - the trends are up - and why clownish quality control at *Nutrients* twice has allowed publication of the nonsense "sugar down, obesity up" conclusion.

Nutrients' dismal performance on quality control is especially troubling because **obesity and its related disorders are the single-biggest health issue for a growing proportion of our society**. Reliable information is critical, yet here we have **an academic journal going out of its way to support a paper that has - via its spectacularly false conclusion - become a menace to public health** (see #6 at www.australianparadox.com).

Neither the authors nor their strong-but-misguided supporters at *Nutrients* have shown any inclination to **do the right thing and correct the public record**. *Nutrients* claims that "the desired standards of publication" were met, yet the available data - in its authors' own charts - show increased sugar consumption. **The general public has been left misinformed about the link between sugar and obesity. No wonder this troubling public-health controversy is attracting growing media interest.**

It is unacceptable for trusted parts of the science community to make a habit of publishing misinformation on key facts surrounding the causes of obesity. Accordingly, **I have argued that *Nutrients'* Editor-in-Chief should resign**, and hand over his quality-control responsibilities to someone who takes more seriously the need for a science journal not to publish papers full of dominating errors, especially if they are prone to become a menace to public health. It was **Max Planck** who once said (something like) "Science advances one [career's] funeral at a time" (http://en.wikiquote.org/wiki/Max_Planck).



* Data are cross-sectional and represent 158 countries in 2007; trend lines are fitted using a quadratic polynomial

Sources: FAO; RBA; World Bank

<http://www.rba.gov.au/speeches/2011/images/sp-ag-101111-graph3.gif>

Low-GI school is putting the University of Sydney on the wrong side of history

Dr Spence, my concerns about the University of Sydney are far broader than just a couple of your nutritionists publishing a third-rate paper with a false conclusion in a third-rate academic E-journal. In my opinion, the "big picture" is that your highest-profile scientists are putting the University on the wrong side of history. With respect, the University's senior management would do well to take the time to understand the importance of what is going on here.

Consider the chart on the previous page. The basic story is that a small but growing nucleus of global scientists view added sugar - **specifically fructose, the sweet but dangerous half of table sugar** – as the primary fuel driving the global trend towards obesity, diabetes and other “diseases of affluence”. The simple but solid starting-point for that assessment is the observation that eating heaps more sugar/fructose is one of the first things the global population did as it became more affluent. (You’ll see in a moment why I’m not fussed about the uptrend in meat consumption.)

Unfortunately, **added fructose has become almost ubiquitous in our food supply**: one estimate is that of "the 600,000 food items available in the US, 80% are laced with added sugar [around half of it fructose]" (<http://www.project-syndicate.org/commentary/the-diet-debacle>).

On top of the obvious issue of excessive calories/kilojoules, the little-understood but dominating problem is that added sugar/fructose does something bad to appetite control. Modern society’s unnaturally elevated level of fructose consumption boosts food cravings, which in turn encourages excess “snacking” and the desire for outsized portion sizes, both widely agreed features of the obesity epidemic. This element of “**addiction**” is a critical-if-often-ignored part of why sugar is a big problem. Happily, growing numbers of consumers are finding that when added sugar is avoided, long-lost “self discipline” and appetite control return within weeks. A common finding is that weight-loss then comes easily (this observation is discussed in detail in <http://www.australianparadox.com>).

On that that key issue of addiction, don’t take my word for it. Here’s what **Daniel Lieberman - a heavy-hitting Professor of Human Evolutionary Biology at Harvard University** – wrote just this week:

Simply put, humans evolved to crave sugar, store it and then use it. For millions of years, our cravings and digestive systems were exquisitely balanced because sugar was rare. Apart from honey, most of the foods our hunter-gatherer ancestors ate were no sweeter than a carrot. The invention of farming made starchy foods more abundant, but it wasn't until very recently that technology made pure sugar bountiful.

The food industry has made a fortune because we retain Stone Age bodies that crave sugar but live in a Space Age world in which sugar is cheap and plentiful. Sip by sip and nibble by nibble, more of us gain weight because we can't control normal, deeply rooted urges for a valuable, tasty and once limited resource.

What should we do? One option is to do nothing, while hoping that scientists find better cures for obesity-related diseases like heart disease and Type 2 diabetes. I'm not holding my breath for such cures, and the costs of inaction, already staggering, would continue to mushroom.

A more popular option is to enhance public education to help us make better decisions about what to eat and how to be active. This is crucial but has so far yielded only modest improvements.

The final option is to collectively restore our diets to a more natural state through regulations. Until recently, all humans had no choice but to eat a healthy diet with modest portions of food that were low in sugar, saturated fat and salt, but high in fiber. They also had no choice but to walk and sometimes run an average of 5 to 10 miles a day. (My bolding; <http://www.nytimes.com/2012/06/06/opinion/evolutions-sweet-tooth.html>)

On my reference to “the wrong side of history” in the heading above, my guess is that within a generation, across the global scientific, medical, nutritionist and public-health communities, added sugar/fructose will be linked to obesity and diabetes in the same way that today the sun is linked to sun cancer, and tobacco is linked to lung cancer. Perhaps set up a Google Alert for "fructose" and watch the evidence roll in week after week, month after month.

Even for a slow-moving economist, the incoming evidence that added fructose is a serious health hazard is not exactly wrapped in mystery. For example, “recent data suggest that **fructose consumption** in human [sic] results in increased visceral adiposity, lipid dysregulation, and decreased insulin sensitivity, all of which have been associated

with **increased risk for cardiovascular disease and type 2 diabetes**. A proposed model for the differential effects of fructose and glucose is presented..." (my emphasis; <http://onlinelibrary.wiley.com/doi/10.1111/j.1749-6632.2009.05266.x/abstract> and <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2673878/>).

Contrary to the low-GI industry's claim that "alarmist reports about fructose" involve only "rats and mice fed excessive quantities" of fructose, **US scientists have produced diabetes in Rhesus monkeys within 6-12 months** simply by letting them drink 75grams of fructose at their leisure each day via a 15% mix of standard Kool Aid in 500ml of water. You do not need to be a scientist of great skill to sense that that's a profound result. After all, monkeys locked in cages - with genomes that are **a 93% match with human genomes** - find it pretty hard to cheat on their diets ("enforced compliance"!), and don't lie about what they ate in the previous 24 hours! (<http://www.kraftbrands.com/koolaid/> ; <http://onlinelibrary.wiley.com/doi/10.1111/j.1752-8062.2011.00298.x/abstract>)

As the evidence against modern doses of fructose continues to mount, minimising the amount of added sugar in our diets increasingly will be seen by public-health authorities as the obvious low-hanging fruit in any serious anti-obesity and anti-diabetes campaign. Dr Spence, while your highest-profile scientists in recent years have been keen to downplay the role of added sugar in obesity and diabetes, there's a growing global momentum in exactly the other direction (<http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?pagewanted=all> <http://www.youtube.com/watch?v=dBnniua6-oM>).

New York City mayor Michael Bloomberg's announcement last week of an anti-obesity effort to limit access to giant-sized sugary softdrinks is just the latest in a growing trend. His plan "to **ban the sale of 'supersized' sweetened drinks** in restaurants, cinemas and stadiums has attracted fierce criticism from the US beverage industry but won praise from public health experts, who are urging others to adopt the model" (<http://www.ft.com/intl/cms/s/0/9b7f706c-ab38-11e1-a2ed-00144feabdc0.html#axzz1waQO9UEu>). Also, this week, **Walt Disney Co.** announced a plan to ban advertisements for sugary drinks, sugary breakfast cereals, confectionery and various other junkfoods on its range of entertainment channels for children (<http://www.nytimes.com/2012/06/05/business/media/in-nutrition-initiative-disney-to-restrict-advertising.html?pagewanted=all>).

Notably, one of the global food companies quick to denounce Mayor Bloomberg's plan in that *FT* report last week routinely cites *Australian Paradox* as evidence that sugar consumption and obesity are unrelated. My concern is that *Australian Paradox* has become a menace to public health, with pro-sugar entities both locally and offshore using its spectacularly false conclusion to encourage a dangerously relaxed attitude to sugar in official as well as informal nutrition guidelines (see #6. in www.australianparadox.com).

Happily, the Australian National Preventive Health Agency is watching this issue carefully. Its **chief executive Louise Sylvan** has been quoted as saying that the issue of sugar intake and its contribution to obesity is a "very live issue". Indeed, the Federal Government recently observed that there is growing evidence for the view that Australians keen on better health should eat less added sugar (<http://www.eatforhealth.gov.au/page/about-guidelines>).

While public-health experts increasingly are focused on the adverse health consequences of modern doses of added sugar, **the University of Sydney's highest-profile scientists in recent years have become perhaps Australia's highest-profile defenders of added sugar**, incorrectly downplaying the amount in our food supply, and in any case claiming it is harmless. Consider the following newspaper articles:

- <http://www.theaustralian.com.au/news/health-science/a-spoonful-of-sugar-is-not-so-bad/story-e6frg8y6-1226090126776>
- <http://www.theaustralian.com.au/news/health-science/war-over-sweet-nothings/story-e6frg8y6-1226261140744>
- <http://www.theaustralian.com.au/national-affairs/weight-a-minute-dont-blame-sugar/story-fn59niix-1226080214264>
- <http://www.theaustralian.com.au/news/health-science/disgust-at-claims-sugar-as-dangerous-as-alcohol/story-e6frg8y6-1226260002393>
- <http://www.smh.com.au/lifestyle/diet-and-fitness/how-hard-can-it-be-to-cut-sugar-20100630-zmvt.html>

Dr Spence, it was that **first article** that grabbed my attention last year. It struck me as rather unseemly, even appalling to have high-profile nutritionists going out of their way to defend sugar so enthusiastically. I wondered: Why? After all, Australia's most respected and trusted nutritionist - **Dr Rosemary Stanton** - has been saying bad things about added sugar for decades (and now she also says bad things about the usefulness of the University of Sydney's trademark low-GI approach to nutrition (<http://kangaroovalley.nsw.au/columns/nutrition---dr-rosemary-stanton/april-2012---glycaemic-index---is-it-the-answer>)).

As I explain in detail below, Dr Spence, my concern is that your high-profile nutritionists' **particular low-GI brand of nutrition relies on the increasingly unrealistic assumption** that added sugar - specifically super-low-GI "fructose", the sweet half of table sugar - is not a problem in modern doses. That is, there is a growing body of evidence globally that added sugar/fructose *is* a huge problem, yet the ongoing prosperity of the Low-GI school of nutrition needs added sugar/fructose *not* to be a problem.

Interestingly, the nutritionists whose careers are most at risk from added sugar in processed food becoming widely recognised as a health hazard have, over recent years, happened to become perhaps Australia's most enthusiastic and high-profile promoters of the view that added sugar in our food supply is *not* a health hazard (see newspaper links).

All of the above raises a whole range of public-health and conflict-of-interest issues to be considered by the University of Sydney. Clearly, it not sufficient for the University simply to say that the (spectacularly false) *Australian Paradox* conclusion was "peer reviewed" by a tin-pot pay-for-publication E-journal and expect the issue to go away:

1. Facts matter, especially when we are talking about scientists at one of Australia's leading universities misinforming the public debate on the causes of obesity and diabetes, today's single-biggest health issue for a growing proportion of society. **It is unacceptable for a trusted part of the science community to not correct the public record as soon as it becomes clear that the public has been misinformed.** We are well past that point.
2. **The University of Sydney has a responsibility to ensure that its scientists publicly disclose their conflicts of interest.** In this case, your scientists seem to have a serious conflict of interest that has remained undisclosed despite their high-profile involvement in public debates.

1. Facts don't cease to be facts just because they are ignored

As noted above, I've demonstrated that quality control at the pay-for-publication E-journal *Nutrients* was negligent with regard to the publication of *Australian Paradox* and *Australian Paradox Revisited*. Moreover, when it comes to publishing false conclusions, *Nutrients'* publisher apparently gives little or no priority to correcting the public record or being accountable to the Australian public (see #10 and #5 at www.australianparadox.com).

Dr Spence, whatever your advisor advised - and who was that again? - the fact remains that *Australian Paradox* is dominated by errors that reverse its conclusion and have made it a menace to Australian public health (see #6 at www.australianparadox.com). On the former, I'll try to be brief:

- Your nutritionists' preferred series - Apparent consumption of sugar - was **discontinued as unreliable by the ABS after 1998-99**, more than a decade ago. The ABS found it increasingly difficult to gauge the total amount of sugar already mixed into many thousands of different **imported** food products. With a growing lack of confidence in estimates of total sugar imports produced using its increasingly outdated and overwhelmed counting methodologies - and lacking the prospect of having sufficient resources to do produce reliable estimates in the 2000s - the ABS eventually gave up counting. Awkwardly, with no valid estimates available for imported sugar per person, there are **no valid data available for apparent consumption of sugar per person**. That your nutritionists had no idea that their preferred series actually had been discontinued more than a decade before the publication of *Australian Paradox* put a giant dent in the credibility of the paper - and in *Nutrients'* peer-review process - from the very start.
- Your nutritionists' own charts - showing valid big-picture sugar indicators trending up not down - **completely contradict** their (obviously false) claim that sugar consumption has experienced a "substantial decline" over "the past 30 years". **That's the end of any real debate right there.** As noted in my letter last

month, the ridiculous tangles your nutritionists manage to get in trying to prove up is down are a bonus, because such examples of scientific method rarely are observed near a serious university.

- On the ridiculous, your nutritionists' **main excuse for why my analysis is wrong was their (amusing) made-up story that cars not humans are eating up to almost one-quarter of the available sugar. Yep, the cars is what done it.** Even after quietly reversing from that spectacularly false claim, however, your nutritionists did not concede the point that sugar consumption and obesity both have increased over recent decades. Yet the available information remains unchanged and they now have no good excuse - not even a made-up one - to explain why their valid big-picture charts - Figures 1- 4 in my previous letter - all trend up (<http://www.australianparadox.com/pdf/NutrientsLETTER2405122.pdf>).
- The fact that your scientists resorted to the invention of a false detour involving cars not humans eating a big and growing chunk of the available sugar **confirms that there is little real substance behind the claim of an Australian Paradox.** The always-unlikely claim of a 30-year decline in sugar consumption – and thus that sugar and obesity are unrelated - **simply fell over when subjected to basic scrutiny.** *Australian Paradox* was demolished by simple fact-checking - so much for earlier quality controls!
- Further defying credibility, your nutritionists in *Australian Paradox Revisited* suggested that typical doses of fructose eaten across the globe today really are no larger than typical doses eaten in earlier millennia ("Fructose Was Not 'Scarce' "). Even the world's "poor" were not really poor "at certain times in history" because they were busy accumulating wealth in the form of honey factories and eating honey by the bucket-load. In Australia, Aboriginal Australians supposedly are eating only about as much fructose today as in pre-European times - before the arrival of commercial 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). Similarly, 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. 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].
- So, traditional Aborigines "adored sweetness" - like most of the rest of us - but in earlier times simply couldn't get enough of it despite expending an extraordinary amount of energy chasing "sugarbag" (bush honey) and other sources of the sweet stuff. Given the documented strong craving for honey/fructose, **back then one might have wondered what would happen to Aboriginal health if honey/sugar/fructose ever were to become available in almost unlimited quantities without much effort at all.** Not asked at the time, that question now appears to have been answered. For example, one study of eating habits in six remote NT aboriginal communities - via records from monopoly community stores - found that consumption of sugar amounted to "approximately 50 teaspoons" per person per day (that's over 90kg per annum, or close to 45kg of fructose a year!). "The proportion of energy derived from refined sugars was approximately four times the recommended intake". Few who worry that fructose is poisonous in modern doses over time are shocked to learn that typical health problems in these communities included high rates of obesity, diabetes and heart and kidney diseases. The low-GI industry is unlikely to agree, but **eating a low-GI plant food (fructose) not high-GI plant foods looks to have been near the centre of those communities' health problems** (http://www.nt.gov.au/health/healthdev/health_promotion/bushbook/volume2/chap3/food.html ; <http://www.healthinonet.ecu.edu.au/health-risks/overweight-obesity/reviews/our-review>).

Dr Spence, I might have been somewhat less concerned about the misinformation promoted in *Australian Paradox* and *Australian Paradox Revisited* but for the fact that your nutritionists' errors in this episode are not a "first offence". On top of their spectacularly false conclusion that sugar consumption and obesity are unrelated, the co-authors of *Australia Paradox* also have co-authored at least one best-selling book promoting both the low-GI diet and

another spectacularly false claim: **“There is an absolute consensus that sugar in food does not cause diabetes”**. That claim features in both the industry's flagship, *Low GI Diet Handbook* (2011, p. 73) and *the diabetes and pre-diabetes handbook* (sic, 2010, p. 43).

Could your low-GI nutritionists even say that spectacularly false sentence out loud with a straight face? There's “an absolute consensus”, yet debate rages all around? To say there's a “consensus” is false and misleading - **to say it's an “absolute consensus” is an absolute disgrace**. It's past time to correct the next editions of those two books, to give everyday readers at least a hint of current scientific realities.

You get my drift. I'm concerned about what seems to be **an emerging pattern of misinformation** on the causes of obesity and diabetes coming from the University of Sydney. Interestingly, in both of these high-profile examples, the misinformation involves downplaying the extent to which modern doses of added sugar are contributing to our growing health problems. What is interesting is that your nutritionists' particular low-GI brand of nutrition relies on low-GI fructose/sugar not being a problem.

2. The low-GI industry's serious but undisclosed conflict of interest

Dr Spence, your high-profile low-GI scientists' have made at least three false claims, in my opinion. These include:

- Sugar consumption has declined substantially over "the past 30 years", so sugar and obesity are unrelated;
- Australians' sugar/fructose intake today may well be little different from levels in pre-European times; and
- “There is an absolute consensus that sugar in food does not cause diabetes”.

A **critical question** for the management of the University of Sydney is whether there is more than just a series of careless – but obvious – mistakes behind these false claims. As an outsider, I'm unable to make a judgment. We do know, however, that your high-profile scientists have devoted their careers to promoting the Glycemic Index (GI) approach to nutrition (<http://www.gisymbol.com.au/aboutus.php>). And we have seen in the newspaper links above that the low-GI school defends added sugar/fructose rather actively against the view that it's a major driver of obesity or diabetes. As I've said, it's rather unusual to see serious nutritionists going out of their way to defend added sugar.

So let's have a look at the low-GI school's serious conflict of interest - apparent or real but certainly undisclosed. Many are aware that the low-GI industry 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. So everyday boiled potatoes are deemed borderline evil - suffering up to triple-figure GI readings - despite the fact that they score very favourably on the (more important?) measure of "satiety" (<http://www.ncbi.nlm.nih.gov/pubmed/7498104>).

Importantly, it turns out that 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 recipe for a lower GI reading**. Food companies keen to “get on board” the Low-GI train have an incentive to add fructose, making the processed food lower GI and less healthy in the process. How low on the GI scale would you like your manufactured food product, Sir? 55? 54? 53? 45? 40? Tell me when to stop pouring. For example, check out the sweet-as low GIs of high-added-fructose “Coca Cola”, “Milo”, “Snickers Bar”, “Ice Cream”, “Cake” in a search at <http://www.glycemicindex.com/foodSearch.php>.

The fact that fructose has a super-low GI of 19 is a profound flaw in the “GI story”. This fundamental flaw is the awkward bit 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 Lustig, Gillespie and a growing nucleus within the global scientific community believe – that in modern doses it is driving global obesity and diabetes – the low-GI industry will have been completely wrong on the thing that matters most. (Maybe set up a Google “alert” for fructose and watch it happen?) 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.

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 the low-GI industry did – for whatever reasons – when it published its spectacularly wrong but nevertheless high-profile *Australian Paradox* in the little-respected *Nutrients* (<http://www.australianparadox.com/pdf/NutrientsLETTER2405122.pdf>).

For the low-GI industry, **the good news** is that the most-popular carbohydrate in our food supply – added fructose – also is pretty well the lowest-GI carbohydrate. **The bad news** is that a growing volume of scientific opinion considers super-low-GI fructose to be a primary driver of the global obesity and diabetes epidemics.

The likelihood that the low-GI industry would **tend to contract or collapse** if modern doses of super-low-GI fructose/sugar came to be viewed widely by consumers as a major health hazard represents a **serious conflict of interest** for the high-profile low-GI industry. At the same time that evidence against super-low-GI fructose has been accumulating, the low-GI industry has been very active in the public debate downplaying the extent to which sugar/fructose is a health hazard.

In summary, the low-GI industry's conflict of interest boils down to the following three elements:

- (i) It matters for the prosperity of the low-GI industry that super-low-GI fructose - mixed into tens of thousands of processed foods - remains widely perceived by consumers as safe to eat in today's usual amounts.
- (ii) The low-GI industry has been notably high profile in claiming that super-low-GI fructose in added sugar is not a health hazard.
- (iii) Society is trending towards obesity, diabetes and other "diseases of affluence", and there is growing evidence that modern doses of super-low-GI fructose in processed foods are a key – *the key?* - driver of that process.

In my opinion, the general public should know about (i) and (iii) when interpreting (ii). 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, the media and everyday Australians looking for reliable dietary advice need to be aware that the low-GI industry has a strong interest in saying that added sugar is not a problem. **Thus the low-GI industry cannot be treated simply as an objective observer in any debate involving sugar/fructose and health issues.** It has 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".

Dr Spence, I have documented the tendency of the University's low-GI school to occasionally get its facts wrong on sugar/fructose, for whatever reasons. Moreover, the low-GI school has a serious conflict of interest that as far as I can see has remained undisclosed to the general public. As you would be aware, the University is required to encourage its researchers, if they need to be reminded, to publicly disclose their conflicts of interest. After all:

Conflicts of interest in the research area are common and it is important that they are disclosed and dealt with properly. Conflicts of interest have the potential to compromise judgments and decisions that should be made impartially. Such compromise could undermine community trust in research (pp. 24-25 at <http://www.nhmrc.gov.au/files/nhmrc/publications/attachments/r39.pdf>).

I'm not sure what disclosure in this case should look like exactly. If it's to be credible, perhaps something like this:

Disclosure: *The University of Sydney's low-GI approach to nutrition implicitly assumes that super-low-GI fructose (GI 19, the sweet half of table sugar and a common addition to many or most processed foods) is not a health hazard in modern doses. Thus the prosperity of the low-GI industry and the careers of its researchers rely on ongoing public acceptance of the view that eating added sugar/fructose is not a health hazard. At the same time, there is growing evidence that eating added sugar/fructose in modern doses may be the biggest-single driver of global obesity and related disorders. Yes, the low-GI school in the past has inadvertently had its facts completely wrong on the links between sugar/fructose and obesity and diabetes, in a high-profile way, and has been slow to correct the public record. Nevertheless, the strong view of the low-GI school remains that added sugar/fructose in modern doses is not a problem. To be on the safe side, you might want to eat only low-GI foods with no added sugar, say like tomatoes, carrots and kidney beans, etc.*

Somewhat more focused, appropriate disclosure might read as follows:

Warning: *Fructose is the lowest GI carbohydrate. This means that sweet-tasting foods containing added sugar often are low GI. When using GI as a dietary intervention you should disregard foods bearing a low GI certification if that product also contains added sugar or fructose.* **Disclosure:** *JBM and AWB are directors and/or employees of the Glycemic Index Foundation (GIF), which receives licensing fees from the sale of sugary products. [Also report if JBM and AWB receive other financial compensation from the sale of sugary products.]*

Closing comments and a \$40,000 challenge for Australia's researchers

The obvious problem with *Australian Paradox* and *Australian Paradox Revisited* is that the high-profile conclusion – sugar consumption and obesity are unrelated - is hopelessly wrong. Actually, sugar consumption and obesity both have increased over the past 30 years, as far as anyone can tell from the main sources of official information. Paying only limited attention to that information, the standard of analysis in the disputed research is well below that required from any serious university. The fact that these papers of woeful quality were published on the internet is a **serious embarrassment** for the low-GI school at the University of Sydney, the broader University community and even the little-respected E-journal *Nutrients*.

Looking on the brighter side, however, **this episode has had its lighter moments**. I chuckled a bit when – faced with my critique highlighting the errors in *Australian Paradox* that reverse its (false) conclusion - your underperforming nutritionists produced a rebuttal that introduced another eye-popping error: the made-up fact that cars not humans had been eating a big chunk of the available sugar! What a ripper! It will stick in my mind for a lifetime, as the nutritionists-under-scrutiny's version of the old "dog ate my homework" excuse!

Yet even after quietly abandoning their spectacular made-up false claim, your low-GI nutritionists did *not* concede that humans must have eaten that big chunk of sugar after all. Instead, defying credibility - and the trends in (human) sugar consumption in their own valid charts – they just kept on pretending that their “sugar down, obesity up” conclusion was unscathed rather than demolished. (For those who missed the cars-ate-the-sugar claim earlier, I am not making this up! It's all documented at <http://www.australianparadox.com/pdf/NutrientsLETTER240512.pdf> . Again, check out the uptrends in Figures 1-4).

Dr Spence, I think it is a pity that you have chosen to support your underperforming low-GI scientists and their dud *Australia Paradox* paper rather than supporting **the need for the Australian public not to be misled on critical health matters**. The University receives vast public subsidies, and taxpayers I think would want the University - now that it's fully informed on the mistakes that have been made - to correct the public record on the facts surrounding obesity and diabetes - the biggest health issue for a growing proportion of taxpayers and their children - without further delay.

Given the importance of this issue, you perhaps will understand that until the public record is corrected, I am unable to take the University of Sydney's outsourcing of its quality control to the little-respected pay-for publication E-journal *Nutrients* as the last word in this dispute. **Indeed, 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.

There are only two rules. Researchers who accept this challenge must seek a valid proof that incorporates the authors' Figure 1 from *Australian Paradox Revisited* - which shows “**sugar availability**” from 1979-80 to 2009-10 - as well as official information on trends in Australia's **imported foodstuffs**. To ensure participants all start off on the right foot, Figure 1 is reproduced at <http://www.australianparadox.com/pdf/NutrientsLETTER2405122.pdf> and the dataset for imports can be viewed at http://www.daff.gov.au/data/assets/pdf_file/0011/1910819/food-stats2009-10.pdf (various charts on p. 10, or p. 17 of 189).

Moreover, note that: Apparent consumption ~ {Production less Exports} plus Imports less “Leakages”; so **Apparent consumption ~ {Sugar availability plus Imports} less “Leakages”**.

Now, I don't want to dampen the enthusiasm of those keen to get busy on that \$20,000 up for grabs but, yes, the fact that sugar availability has trended up over the past 30 years – with that trend reinforced in the decade and a half from 1995-96 by the strong growth in imports of (sugary) bakery products, confectionery, soft-drinks, cordial and syrup, etc – is more than a slight problem for the story that fructose/sugar consumption has declined, let alone has shown "a

consistent and substantial decline" over the three decades to 2010. (There's also the trend rise in fruit-juice consumption to consider.)

My **second rule** is that participants who seek to claim the reward while arguing the existence of giant made-up "**Leakages**" involving cars (or monster trucks!) eating big chunks of the available sugar - or that rapid growth in sales of bottled water somehow offsets the trend increase in fructose consumption via sugary softdrinks and fruit juices - will be disqualified immediately! I doubt it will come to that, however, because most observers quickly conclude that there's little if any credible evidence that fructose/sugar consumption has trended down over the past 30 years. Indeed, I expect that - if they take the time to check out the dispute on www.australianparadox.com - most if not all of the University of Sydney's large team of fine scientists will quickly confirm my observation that the trend, indeed, is up not down.

Some of us, of course, have the **useful reality-check** of having been alive since 1980, consuming food and occasionally visiting big grocery stores, 7-elevens and cafes along the way. If sugar consumption really has declined over the past 30 years, it's a wonder the shelves in food stores *today* are so well stocked with almost endless varieties of sugary products. It wasn't always thus. Is everyone today really "just looking"?

Dr Spence, I hope that after your teams of scientists report themselves unable to demonstrate that sugar consumption and obesity have trended in strongly different directions over the past 30 years - unable to confirm the main (false) conclusion in *Australian Paradox* - you will reconsider your decision to do nothing on this matter. So too, perhaps the authors - and the editors of *Nutrients* - will consider resignation, in the Max-Planck tradition of assisting the advance of scientific knowledge. In any case, I hope that the University of Sydney eventually will do the right thing and correct the public record on the erroneous conclusions produced in this troubling *Australian Paradox* episode.

In the meantime, please remind your low-GI nutritionists to publicly disclose their serious conflict of interest, and of the need for researchers not to publish shoddy research that simultaneously brings the University into disrepute and becomes a menace to public health. A good start on that front might be for management to insist that University of Sydney researchers publish important papers with supposedly profound conclusions only in real academic journals with real quality control.

Again, Dr Spence, apologies for being cranky and long-winded on this issue. And thank you for your time.

Yours sincerely,
Rory

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rory robertson
economist and former-fattie
now fairly fructose free! 😊

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Strathburn Cattle Station is a proud partner of YALARI,
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