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Giving up sugar and the inequalities of abstinence

Abstract

Sugar is increasingly supplanting fat as public enemy number one in public health campaigns, and calls for significant reductions in consumption have provided fertile ground for the proliferation of popular texts and services advocating sugar abstinence. This paper explores three modes of popular sugar abstinence (evangelical, experimental and charitable). These vary in chronology, philosophy and the intensity of abstinence, but all serve as sites of identity production and self-entrepreneurship for those able to advocate for, and engage with, them. The paper argues that these abstinence narratives are not only premised on the exercise of social privilege, but that they also necessarily reproduce and sediment those social hierarchies. This is achieved through a combination of nutritionism and healthism, dislocating sugar and its consumption from the vast social, economic and environmental inequalities within which both the consumption of sugar, and the act of giving it up, is made meaningful.

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Introduction

In recent years, sugar has supplanted fat as public enemy number one in public health campaigns against a range of non-communicable diseases (NCDs). For example, in 2015, the World Health Organisation (WHO) identified sugar as a key factor in NCD-related deaths, with high intakes of ‘free sugars’¹ associated with “poor dietary quality, obesity and risk of NCDs” (WHO 2015: 1). Free sugars, the report explains, contribute to “the overall energy density of diets, and may promote a positive energy balance”, as well as contributing to widespread dental disease globally. The 2015

report by Public Health England (PHE), *Sugar Reduction: the Evidence for Action*, reprises this theme, claiming that “Consuming too much sugar and too many foods and drinks high in sugar can lead to weight gain, which in turn increases the risk of heart disease, type II diabetes, stroke and some cancers. It is also linked to tooth decay” (PHE 2015: 9). Obesity looms large in these warnings as a disease, as a cause of other diseases, and as a visible proxy for health status. The WHO recommended a reduction of the intake of free sugars to below 10% of total energy intake, with a conditional recommendation of a reduction to 5%; following the recommendation of the UK Scientific Advisory Committee on Nutrition (SACN 2015), PHE opted for the 5% target, noting that this is a significant reduction from current mean intakes of 12-15% (PHE 2015: 11).

Sugar figures in these documents as a specific and urgent public health threat about which something must be done – an urgency which echoes the familiar justificatory rhetorics of the ‘war on obesity’, and which Mayes describes in his analysis of the concept of ‘lifestyle’ as activating “a range of strategies to protect and secure the population” (2016: 21). As the PHE report notes, “this is the first time SACN has made a recommendation to minimise consumption of a specific food and its importance must not be underestimated” (2015: 15). The expectations for the benefits of sugar reduction are high, including the reduction of the burden of disease and its associated health care costs and quality of life improvement. It is also anticipated to reduce inequalities, since “the lowest income groups suffer the highest burden of sugar-related diseases and have the highest intakes of sugar in their diets” (ibid.) – a claim that reinforces the linking of social disadvantage with behaviours rather than structural inequalities in the rush to intervene. The report reminds us emphatically:

“**Any** significant progress to reduce sugar intakes would yield benefits” (PHE 2015: 9, emphasis in original).

This policy-level focus on sugar provides the backdrop for a burgeoning field of anti-sugar advocacy and advice. For example, the public health programme, Change4Life, funded by the UK’s Department of Health, urges readers to “Be Sugar Smart”, listing a series of “food smart swaps and tips” for reducing sugar intake, as well as links to a tracker app that enables users to scan in bar codes to calculate sugar content (Change for Life 2017); Action on Sugar (2017), comprised of health professionals and other related experts, serves as an information and advocacy hub, particularly in relation to food industry regulation, and hosts an annual ‘Sugar Awareness Week’; and Sugarwise (2017) advocates for increased low or no-sugar options, tax reductions for low sugar foods and offers a branded certification for products low in free sugars. These interventions are oriented towards the reduction of total sugar consumption in line with the PHE recommendations, but they also provide the context for the dramatic proliferation of popular texts, websites and business ventures oriented towards abstention from sugar. Drawing on a range of published (online and hardcopy) sources, this paper explores what it means to give up sugar in this moment of anti-sugar urgency. This is not intended to be an exhaustive analysis of the extensive genre of sugar abstention narratives, but rather, using high profile texts as exemplars, the paper aims to draw out the key themes and explore their implications in the wider context of the attack on sugar. As such, the texts focused on here are the most commonly visible at the time of writing, as identified via online searches (e.g. Google, Amazon) and the cross-referencing of key texts and anti-sugar advocates between narratives. The analysis takes a discourse analytic approach, treating texts as actively doing rather than describing, and asking what those texts are trying to

achieve and how (Gill 2000, Wood and Kroger 2000). Based on this analysis, the paper explores what it means to give up sugar in this moment of anti-sugar urgency by focusing on three intersecting but divergent modes of sugar abstention: (1) evangelical; (2) experimental; and (3) charitable. Through an analysis of these three modes of abstention, this paper argues that sugar is far from only being a source of ‘empty calories’ and its consumption or abstention is never simply a question of objectively knowable ‘health’. Instead, drawing on insights from critical nutrition studies (Hayes-Conroy and Hayes-Conroy 2013a) and fat studies (Rothblum and Solovay 2009; Tomrley and Kaloski Naylor 2009), both of which raise critical questions about normative understandings of food-body relations, sugar emerges as an over-determined node for social and medical anxieties about 21st century health, bodies and consumption. Furthermore, it is a site of privileged self-actualisation through which some can demonstrate bodily discipline and deserving citizenship and accrue social and economic capital, while others are excluded and rendered abject. This highlights the ways in which sugar abstention is not only embedded in social inequalities, but actively reproduces them.

The next section of this paper interrogates the extent to which the attack on sugar can be understood as a new departure, arguing that it is both inextricable from the more established demonization of fat (in food, in bodies) and its conventional nutritional wisdoms, and a crisis of its time. This status as both continuous and novel creates the conditions for the self-entrepreneurial potential of giving up sugar. The remainder of the paper looks in turn at the three abstention narratives, drawing out points of intersection and divergence, before addressing the inequalities upon which sugar abstinence is premised.

What's new about the rush to sugar?

The focus on sugar marks a shift from the prevailing wisdoms of the 1960's onwards, and consolidated through the work of researchers like Ancel Keys (1980), that it is fat – and particularly in its saturated form – that underpins the increase in costly health conditions that are deemed to be hampering productivity and stretching health services to their very limits. However, the accusatory turn to sugar is not a consecutive shift from one food enemy to the next, but rather, gains purchase through a series of nutritional and health continuities. Firstly, sugar never completely escaped suspicion during the low-fat hype (e.g. Dufty 1975, Yudkin 2012), and the 'empty calories' of sugary foods have consistently been understood popularly and by health professionals as potentially contributing to obesity. Conversely, mainstream dietary advice, even while treating sugar as an urgent threat, maintains a commitment to limiting the consumption of fat, and especially in its saturated form. This was exemplified by the response in 2016 to the National Obesity Forum's release of the report, *Eat Fat, Cut the Carbs and Avoid Snacking to Reverse Obesity and Type 2 Diabetes* (NOF 2016). Following the evangelical logics of the low-carbohydrate, high-fat (LCHF) movement, the report argued controversially that prevailing dietary wisdoms are the product of flawed science and the corruptive influence of the food industry; that saturated fat consumption is not related to heart disease; that full fat dairy may protect against obesity; and that the "optimum sugar consumption for health is ZERO" (NOF 2016: 8, original emphasis). A *British Medical Journal* editorial described the report as "oversimplistic" and "flawed" in its assumptions and use of evidence (Kromhout 2016), while Public Health England and the British Dietetic Association respectively denounced it in the media as "irresponsible" and "extremely dangerous" in its forgiving approach to saturated fat (Campbell 2016).

Sugar and fat, then, exist in (contested) relation to each other rather than as consecutive threats to health. They also continue to occupy the same anti-obesity territory, characterised by an imprecise hostility to fatness as a threat to individual and population-level health, and as constituting an urgent need for action which places responsibility on individual choices and behaviours rather than structural change (Gard and Wright 2005, Saguy 2013, Hatch 2016).

A second continuity lies in the embeddedness of the anti-sugar movement in the established nutritionist paradigm, relying on “a reductive focus on the nutrient composition of foods as the means for understanding their healthfulness, as well as by a reductive interpretation of the role of these nutrients in bodily health” (Scrinis 2015: 2, original emphasis). In particular, the contemporary attack on sugar reflects what Scrinis calls “the era of good-and-bad nutritionism” (ibid.: ch. 4). This is exemplified by the focus on fat that gained momentum in the 1960’s, and marks a shift from the concerns around malnutrition that drove 19th and early 20th century efforts to quantify the nutritional content of food towards anxieties around over-consumption (ibid.: 74). This led to nutritional binaries of ‘good’ and ‘bad’ foods, resulting in a focus in dietary messages on what not to eat. These single nutrient proscriptions, as with all nutritionism, are based on “the decontextualization, simplification and exaggeration of the role of nutrient in determining bodily health” (ibid.: 5), to the exclusion of questions of food quality or the combination of foods with which the problematized nutrient is consumed. This is particularly true in the case of sugar, which is rarely consumed in isolation and yet is the focus of a sustained single-nutrient-focused reduction campaign.

Despite the continuities evident in the rush to sugar, it is also a crisis of its time. This is particularly evident in relation to changing understandings of the body characterised by “the emergence and dominance of scientific practices, technologies and theories that conceptualize and conduct the surveillance of the human life at the molecular level” (Hatch 2016: 30). According to Rose (2007), the molecularisation of the body marks a departure from ‘molar’ conceptualisations of the body “at the scale of limbs, organs, tissues, flows of blood, hormones and so forth” (2007: 5), looking instead towards molecules such as DNA to define human difference and to inform future-oriented understandings of bodies at risk and in need of health-maximising intervention. This is not to argue that biomedicine and health care no longer operate on the molar scale; indeed, according to Rose, this is how most people continue to imagine and act upon their bodies. This is particularly the case for obesity, for example, where internal and external body fat, ‘clogged arteries’ and damaged organs serve under the clinical gaze as the visible evidence of health-damaging effects of bodily ‘excess’ (Throsby 2012). However, obesity is also increasingly conceptualised as a metabolic disorder – that is, as a disorder of “the biological processes by which bodies metabolize nutrients derived from food” (Hatch 2016: 2-3), and which can only be diagnosed via an “aggregation of clinical and laboratory measurements” (ibid.: 3).

The turn to sugar aligns with this molecularisation. Unlike the action of fat which is easily (if reductively) imagined settling on the body as fat in visible ways, sugar is understood as acting in the body in ways that are largely invisible to human observation without the mediation of technologies of measurement and their associated biomarkers. This invisibility also exacerbates the invidiousness of the risk

that attaches so easily to the consumption of sugar: anybody can be at risk and not know it. As popular anti-sugar author, Robert Lustig, warns menacingly: “You think you are safe? You are SO screwed. And you don’t even know it” (2014: 7, original emphasis). This invisible threat to health is also compounded by the invisibility of sugar itself, which is conceptualised within anti-sugar rhetorics as ‘hidden’ in everyday processed foods and requiring constant vigilance (Moss 2013).

The compulsion to understand and manage risks to health lies at the heart of the moralisation of health that Crawford described as ‘healthism’ (1980, 2006), and he argues that the early 21st century has seen an intensification of this health consciousness and the moral imperative to ‘achieve’ health and manage risk (2006: 416). The ubiquity of mass media, the commercialisation of health products and services, the expansion of professional health promotion, increased awareness of environmental hazards and the growth of technologies for detecting risk factors (including at the molecular level) all converge to aggravate insecurities around health. At the same time, this reinforces the ideological conviction that health can (and should) be accomplished through the exercise of individual responsibility and self-control (Crawford 2006: 416). This combination of competing and coincident nutritionist conceptualisations of food and health, the molecularisation of the body, the proliferation of risk, and the intensification of the imperative to health consciousness collectively provide fertile ground for concerns about sugar in ways that make giving it up meaningful in contemporary society.

Both the continuities and novel intensifications in the contemporary attack on sugar exemplify what Hayes-Conroy and Hayes-Conroy (2013b: 1-3) call “hegemonic

nutrition”. This is a repressive approach which is characterised by (competing) attempts to standardise and quantify the food-body relationship for distillation into universalised dietary prescriptions; a reliance upon reductionist understandings of nourishment; the decontextualisation of food and its consumption; and a commitment to a hierarchical knowledge system that privileges expert (scientific) knowledge. These attributes also reflect the persistent reproduction of ‘health’ as a “transparent, universal good” (Metzl 2010: 2) and of obesity as self-evidently incompatible with health in ways that erase not only the complex social and cultural configuration of both health and obesity, but also their potent moral charge (Farrell 2011; Metzl and Kirkland 2011). This paper explores what goes missing, and to what effect, when sugar (and its abstention) is so closely defined by normative discourses of health and nutrition. In doing so, the aim is not to arbitrate between different degrees or strategies of sugar reduction, but rather, following Hayes-Conroy and Hayes-Conroy’s challenge to hegemonic nutrition, “to change the rules of the game and who is playing them” (2013b: 4).

Giving up sugar

The act of giving up sugar begins from the understanding that it is simultaneously ‘bad’ and alluring, that its allure is part of its badness and that giving up sugar will be both challenging and elicit rewards. Images of illicit drug addiction abound; it is “pure, white and deadly” (Yudkin 2012), but compellingly soothing and pleasurable. This image is bolstered by sugar’s association with other potentially addictive (legal) substances such as alcohol (Taubes 2017: 35-36) and caffeine (Mintz 1985, Carpenter 2014), and the familiar experience of craving more of a sugary food gives further common-sense weight to the metaphor. While there is some evidence from

animal studies that rodents can become sugar dependent (Avena, Rada et al. 2008), the jury is out on whether sugar is addictive for humans. Westwater, Fletcher et al (2016), for example, argue that studies of the neurochemical effects of sugar do not support the case for sugar addiction (see also, Ziauddeen, Farooqi et al. 2011, Ziauddeen and Fletcher 2013), and even the most determined to connect sugar with addiction, particularly in an anti-obesity context, acknowledge the limitations of this approach (Gearhardt, Grilo et al. 2011, Lustig 2014, Taubes 2017). Nevertheless, “sugar addiction remains a very popular and powerful idea” (ibid), particularly in lay understandings, which in turn reinforces the framing of giving up sugar as a heroic act of healthful overcoming and good citizenship. However, as exemplified by the three modes of sugar abstention discussed below, the act of giving up sugar can take multiple forms, incorporating diverse chronologies and intensities of abstention, and differing understandings of what ‘counts’ as sugar and the threats that it poses. This in turn generates diverse (but intersecting) self-entrepreneurial possibilities and exclusionary effects.

Evangelical abstention

The most vociferous of these modes is what I have labelled evangelic abstention. This refers to the active and often impassioned promotion of sugar abstention, usually via commercial products and services, through the mobilisation of a dietary philosophy and practice that gleans its authority from the strategic deployment of personal experience, scientific and medical discourse and the rhetorics of anti-obesity and addiction. The thriving market in low-carbohydrate and paleo-inspired diets exemplifies this mode of abstention (e.g. Audette and Gilchrist 1999, Atkins 2003, Cordain 2011, Noakes, Proudfoot et al. 2015). These diets do not constitute a unitary

programme, with each struggling to articulate a unique approach to secure a larger portion of the market. Nevertheless, they share a contempt for the fat body and they repudiate not only free sugars, but also carbohydrates more generally, as metabolically destructive and unsuited to ‘how we are meant to eat’. Instead, they look nostalgically back to an ill-defined pre-agricultural ‘paleolithic’ hunter-gatherer era, where humans thrived on diets high in animal protein and fats (Knight 2011, Knight 2015). They mobilise the rhetorics and authority of science to articulate an angry critique of conventional high-carbohydrate, low-fat nutritional advice, which they hold as culpable for rising obesity rates and its presumed health consequences (Gunnarsson and Elam 2012, Jauho 2016).

There is also a burgeoning field of abstention evangelists who focus their attentions specifically on sugar (rather than carbohydrates more broadly) (e.g. Steward, Bethea et al. 2003, Bennett and Sinatra 2007, Gillespie 2008, Wilson 2014, Mosley 2015). These texts typically expound a personal narrative of dietary conversion, set out their dietary philosophy (including a justification through science), and then offer a ‘how-to’ section, including psychological strategies and menu plans, with the intention of converting readers to the sugar-free path. These are often also gateway texts to paywall-protected online resources, services and communities for acolytes. These authors distance themselves from the low-carbohydrate and paleo-inspired diets as unnecessarily restrictive, while sharing considerable common ground in terms of the evangelical strategies that they employ.

Appeals to science and the display of scientific competence are fundamental to evangelical abstention, laying claim to an authoritative platform from which to

challenge mainstream dietary advice. These appeals operate not as a critique of science per se, but of what they see as a corrupt and flawed science-in-practice, subject to the corruptive influences and desires of politics and big business. In their study of the Swedish LCHF movement, Gunnarsson and Elam describe advocates as “inventive popularisers of science” who have “succeeded to some degree in turning a conventional tool of incumbent scientific authority into a weapon to be turned back against this authority” (2012: 319). As Jauho observes in his study of low-carb dieters’ narratives of science, these are invitations to a social construction of competence – discursive moves which not only legitimate a dissenting position, but also construct an identity through the appropriation of the symbolic cultural capital afforded by the command of the scientific idiom. To be an anti-sugar evangelist, then, is to engage in this critical work, albeit selectively. For example, the core claims of the ‘war on obesity’ that equate fatness with ill-health are never subject to the same degree of interrogation, to the exclusion of the extensive fat studies literature challenging those assumptions (e.g. Gard and Wright 2005).

This prized scientific literacy is facilitated by two different kinds of key translators. The first group are predominantly white, male scientists, who speak with professional authority and offer up digestible accounts that are intended both to persuade and to enable individuals to become lay experts in their own right. These are exemplified by science writer, Gary Taubes (2010, 2017), sports and nutrition scientist, Tim Noakes (2013, 2015), nutrition and exercise physiologist, Loren Cordain (2011) and paediatric endocrinologist, Robert Lustig (2014). These figures take pride in their status as dietary heretics and iconoclasts who challenge mainstream nutritional science with science itself, with texts repeatedly returning to tales of persistence in the

face of professional exclusion and persecution. Opposition only affirms their world view and is mobilised as evidence of the validity of their courageous truth-telling. For example, in 2013, Noakes published an article in the South African Medical Journal based on self-reported weight loss among new LCHF dieters (Noakes 2013). Presented as a series of case studies, the paper attracted vociferous criticism for its lack of scientific rigour, but for Noakes, this simply served as confirmation, arguing: “If I was totally wrong, nobody would have made much of a fuss” (News24.com 2013).

The second kind of anti-sugar translator comes in the form of non-scientists who position themselves as autodidacts and (self-)entrepreneurs, often across an array of self-improvement platforms. This is exemplified by David Gillespie (2008), whose website describes him as “Author. Speaker. Entrepreneur” (Gillespie 2017), and journalist and wellness entrepreneur, Sarah Wilson (2014). Gillespie is a former corporate lawyer and co-founder of a software company, and has written books on food, education and the psychology of the workplace. His website quotes a Courier Mail description of him as “a polymath, an old-fashioned Renaissance man, who finds few things dull and everything else interesting”. His self-narrative, then, is not one of established scientific expertise, but as a truth-seeker and myth-buster. In *Sweet Poison*, which is credited on his website as driving the contemporary wave of sugar awareness in Australia, he takes pride in being “one of those people who can’t leave a problem alone” (2008: 9), educating himself about the science in his quest for understanding. He describes himself as having to look up every second word in the journals he ploughed through in preparing for the role of persuasive intermediary, concluding: “I won’t bore you with the detail of all the false starts and blind alleys,

but here is what I discovered (in English rather than Latin or Greek)” (ibid.: 10). In the absence of professional scientific expertise, his role as evangelical translator gains endorsement from experiential knowledge based on his own significant weight loss after giving up sugar. In the same vein, Wilson proudly declares that she is “not a white-coated scientist” (2014: 2) and offers a similar narrative of self-entrepreneurial seeking to that of Gillespie: “I interviewed dozens of experts around the world and did my own research as a qualified health coach. I experimented, using myself as a guinea pig, and eventually assembled a stack of scientifically tested techniques that really worked. Then I got serious and committed. I chose” (2014: 1).

Experimental abstention

Experimental abstention refers to the ‘my year without sugar’ memoir genre, where individuals light-heartedly document the motivations, struggles and triumphs of their abstentions to entertaining, but always didactic, effect (e.g. Mowbray 2014, Schaub 2014). The texts include sugar free recipes, shopping tips and abstention strategies and conclude with the lessons learned from the experimental year. Experimental abstention narratives, usually over much shorter time periods, also appear in newspaper and magazine columns (see, for example, Carpenter 2014, Moore 2016, Hayes 2017, Strutner 2017), and they find their mirror image in what could be described as experimental indulgence narratives. This genre was pioneered by Morgan Spurlock’s *Super Size Me* (2004)– a documentary account of 30 days of eating only from McDonald’s – and was deployed by Damon Gameau (2014), whose *That Sugar Film* documented his health-damaging consumption over 60 days of sugar-laden foods commonly perceived as ‘healthy’.

There is significant overlap between evangelical and experimental abstention narratives. Anti-sugar evangelists, and particularly those whose lack of scientific credentials requires them to draw more heavily on experiential accounts to authorise their position, commonly open with narratives of self-transformation born out of experimentation. For example, Gillespie describes trying numerous diets, including paleo-inspired plans, without sustained success, before losing 40 kilos by giving up sugar; and Sarah Wilson's account of the I Quit Sugar brand locates its origins in a two-week experimental sugar abstention, intended as material for a newspaper column. Conversely, the recipes and tips for sugar-free living that conventionally append experimental abstention narratives are implicitly evangelical.

However, there are two key differences between evangelical and experimental narratives. Firstly, for the evangelists, the experimental period provides the foundational narrative for the subsequent explanations, advice and recipes that constitute the main body of their books, websites and commercial services. However, for the experimental abstainers, the period of abstention itself is the primary focus. Gillespie makes this explicit in his foreword to Schaub's *Year of No Sugar*, describing his own book, *Sweet Poison*, as a "translation of the science" rather than an experiential account; Schaub's book, he argues, is "the diary I wish I had kept" (Schaub 2014: xii). The second key difference lies in their relationship to narratives of science. Published experimental abstainers such as Nicole Mowbray and Eve Schaub not only occupy positions outside of conventional scientific authority (as journalists, as women), but also take pride in it and make only passing efforts to grasp, translate and communicate the nutritional science. Consequently, while popular anti-sugar science translations such as Robert Lustig's YouTube lecture, *Sugar: the Bitter Truth*

(2009), which has been viewed over 7 million times, are common touchstones in experimental narratives and serve as proxy expertise, the ‘problem’ of sugar is assumed and the authors’ primary authority is derived instead from their every(wo)man status and their accumulated experiential knowledge. For example, journalist Mowbray describes herself in her memoir, *Sweet Nothing*, as “a normal woman in my early thirties” (2014: 17), and the back cover of Schaub’s *Year of No Sugar* describes the experiment as being about “a real American family” (2014). The implication is clear, and is made explicit in Mowbray’s concluding evangelical sentence: “If I can do this, anyone can” (2014: 302).

Charitable abstention

Both the evangelical and experimental abstainers’ narratives are oriented towards permanent behaviour change, either through ongoing strict avoidance of sugar or in a moderated version once released from the rigours of the experimental period. For example, Schaub concludes by describing herself as transitioning, post-experiment, to being a “Sugar Avider” rather than a “Sugar-Phobe” (2014: 272), and Carpenter (2014), following her family’s 30-day sugar free challenge, concludes that although she is committed to reducing the amount of sugar consumed by her children, she is “certainly not going to be a militant anti-sugar mother”; she is “sugar-aware rather than permanently sugar-free”. Charitable abstention, on the other hand, refers to purposefully provisional periods of abstinence that can be traded for sponsorship. For example, in February 2017, Cancer Research UK (2017a) hosted a Sugar Free February fundraiser, and in March 2017, the British Heart Foundation (2017) launched its Dechox challenge, where participants were invited to publicly renounce chocolate in exchange for donations. This latter is not explicitly about sugar, but the

campaign's 'Survival kit' includes a 'How much sugar?' section, with teaspoons of sugar arrayed next to common chocolate foods, making it clear where the 'problem' of chocolate lies.

Charitable abstention is founded on the premise that sugar is both difficult to resist and 'bad', and that giving up sugar constitutes a form of laudable suffering and a demonstration of willpower that warrants reward. As the Sugar Free February fundraising information sheet declares: "Scrapping the sweet stuff for a whole month is no easy task, so don't be shy about asking friends, family and workmates for sponsorship – you deserve it" (Cancer Research UK 2017b). The programmes lack any significant explanation of the threats to health posed by sugar that are evident in other modes of sugar abstention, but the self-sacrificial act of charitable sugar abstention remains potently coded as an investment in health – both for the abstaining individual and for the future patients who will benefit from research. As the Dechox website asserts, "Your Dechox saves lives", and the Sugar Free February website promises "not only will you make a huge difference to your health, but you'll also help fund life-saving research to beat cancer sooner". This creates a win-win scenario whereby socially-sanctioned investment in the self through activities coded as 'healthy' operates as a means of caring for others (Nettleton and Hardey 2006), serving "as an exchange that in its ideal form creates beneficial outcomes for all parties" (Throsby 2016: 109). This is not to argue that participants are not altruistically motivated in their charitable endeavours, or that their donations are not meaningful to the recipients of those funds. Instead, charitable abstention from sugar should be understood as always more than altruism, or "creative altruism" in Titmuss'

terms”, facilitating self-actualisation alongside benefits to unknown others (Titmuss 1971: 212).

Significantly, charitable abstention can only be realised through other forms of consumption through which compassion and self-discipline can be displayed - for example, through the purchase of branded goods (e.g. wrist bands and mugs) or the display of social media badges or downloadable posters (see also, Moore 2008). The Sugar Free February fundraising information sheet even advises hosting “a night where you let your friends indulge themselves, and they donate to support your steely determination”. The playfulness of this performance of non-consuming consumption highlights the ways in which charitable abstention does not require any fundamental rejection of sugar, and instead, sugar is being mobilised as a vehicle for displays of sponsorship-earning sacrifice and suffering. It is the socially legible act of healthful ‘giving up’ that is the site of self-entrepreneurial work rather than sugar per se. This is illustrated by the other abstention campaigns running alongside those involving sugar; for example, Cancer Research UK also hosts an annual alcohol-free January Dryathlon, where participants can become “dryathletes” in exchange for sponsorship.

The inequalities of giving up sugar

These three modes of sugar abstention differ in philosophy, chronology and intensity, but all share the conviction, whether explicitly or implicitly, that sugar is ‘bad’ and that to give it up is a positive act. They also share the conviction that to give up sugar says something about the kind of person that you are: evangelical abstainers lay claim to qualities of scientific literacy and independence of thought alongside the good citizenship of self-care; experimental abstainers learn through experience and

demonstrate determination and the willingness to exercise control over their lives and health; and charitable abstainers show compassion while investing normatively in the self. In contrast to the familiar rhetorics of emptiness that attach to sugar, these entrepreneurial projects of selfhood highlight the ways in which sugar is laden with meaning and significance, and provide a means through which the embodied individual can be known. However, these abstention narratives are premised on what Guthman calls a “neoliberal anti-politics” (2007: 624), and the price of self-actualisation is the erasure of the vast social, environmental and economic inequalities that underpin both the consumption of sugar, and the act of giving it up.

The white, middle-classness of the world of sugar abstention is fundamental to this depoliticisation. Its primary advocates are scientists, journalists and entrepreneurs already occupying powerful platforms from which to speak and be heard, with lower social positioning and non-whiteness acting as signifiers of poor choices and as sites for coercive state interventions. This is demonstrated in Lustig’s landmark popular anti-sugar text, *Fat Chance: the Hidden Truth About Sugar, Obesity and Disease* (2014). Sixteen of the book’s chapters open with short, illustrative case studies of children, six of which focus on non-white children. The ethnicity of the non-white children is noted in the case studies, alongside potent markers of their social status. For example, the book opens with the case of “Juan, a 100-pound six-year-old Latino boy whose mother is a non-English-speaking farm worker from Salinas, California” (2014: 3). Whiteness is not explicitly marked – “Sally is a beautiful thirteen-year old girl” (ibid.: 105) - but more significantly, while the non-white cases report incidences of poor parenting and ill-informed food choices, obesogenic medical conditions such as hypothalamic tumours, genetic defects and abnormally high insulin release account

for 6 out of the 10 white children's narratives (and none of the non-white case studies). Furthermore, while all but one of the white children achieve positive outcomes (as assessed primarily via weight loss), only one non-white case achieves resolution. Even in this case, while the white children's successes are the result of successful medical interventions and informed parentally-enacted lifestyle changes, salvation for 11-year-old African-American, DeShawn, only comes after Child Protective Services become involved, forcing his mother "to face up to her own sugar addiction" (Lustig 2014: 209). With mothers figuring as the primary carers in the case studies, an implied model of good and bad dietary citizenship emerges along racialized, classed and gendered lines, and the self-actualising potential of sugar abstinence that is enjoyed by popular anti-sugar advocates is beyond their reach.

The middle-classness of giving up sugar is also evident in the non-sugar dietary recommendations, with a focus on locally-produced and home-cooked whole food. This reflects a wider trend in the alternative food movement (e.g. Pollan 2006, Pollan 2008, Campbell and Jacobson 2014), and presumes not only the accessibility and affordability of a whole-food, sugar-free diet, but also the time and capacity to shop for and prepare food (see Guthman 2007). This is exemplified in the documentary film, *The Big Fat Fix* (2016) which makes the case for the LCHF diet. In the film, cardiologist Aseem Malhotra (co-author of the controversial NOF report discussed earlier) and Irish ex-professional athlete, Donal O'Neill, feature in a lengthy segment filmed in O'Neill's adopted home of Cape Town in South Africa, where we see them shopping for, and consuming, grass-fed meats, artisanal cheeses and organic olive oils in a strikingly white, middle class social milieu and without any acknowledgement of the multiple privileges that facilitate that consumption. In contrast, Mowbray's

experimental abstention narrative acknowledges the time and financial costs involved in maintaining her new, albeit relentlessly middle-class, sugar-free lifestyle, declaring that “now my life needed planning” (2014: 85), and recalling that “My bank balance was groaning under the strain of all the fresh produce I was loading up on” (ibid.: 86). However, towards the end of the book, amidst an evangelising account of the sugar-free life as an opportunity to expand food horizons – buckwheat groats, cocoa nibs, “emerald green rich-buttery tasting queen olives the size of walnuts” (ibid.: 281) – she denies the added expenses as an obstacle: “If you can’t afford organic meat, buy free range. If you can’t afford free range, buy what you can afford” (ibid. 282). The privileged economies of shifting from organic to free range overlook the lived realities of food poverty and instead render a healthy diet the product of simple household economy. Evans et al (2011: 335) note the same assertion at work in a strategy document for the UK’s Change4Life, which refutes the ‘myth’ of cost as a barrier to healthy eating with the claim that “You just need to be clever about it”.

This framing reduces diet to a matter of informed choice and ‘clever’ management, effecting a depoliticisation of the production and consumption of food. In the case of sugar, this positions those assumed to consume high levels of sugary food and drinks as feckless citizens, always marked by gender, race and class, obscuring the social inequalities that underpin practices coded as unhealthy, including sugar consumption (Freidberg 2004, Guthman 2007, Guthman 2011, Guthman 2014). This includes the erasure of greater health risks that might make sugar consumption the lesser evil in the face of more immediate threats to health such as hunger or violence. For example, Otto describes the case of a native Alaskan woman who was putting soda in her baby’s bottle despite extensive health campaigns to the contrary; the soda quieted the

baby, explained the mother, “because if he cries when his uncles come in, they’ll beat him” (2017: 3091). These inequalities open up a gulf between those who can give up sugar as part of a profitable project of self-actualisation and those whose abstinence (or reduction) must be coerced. This is exemplified by calls in the US to prevent recipients of Supplemental Assistance Nutritional Programme (SNAP) from using their food stamps to buy sugary drinks, even though research shows that their soda purchases are in line with those of non-SNAP households (Erbenraut 2017). The focus on sugar as the primary threat to health in these campaigns renders invisible issues that targeted disadvantaged groups themselves might identify as priorities for their own well-being, such as employment (Alkon 2013) or racism (Harper 2013).

The social rewards of sugar abstinence (or reduction), then, are a privileged preserve, and the social significance of giving up sugar lies in its display of informed voluntariness and the demonstrable exercise of self-control, enacted in direct opposition to those who must be nudged or coerced into abstinence or reduction. Crawford argues that self-control “is a pillar of middle class identity employed as a shield against downward mobility” (2006: 415), operating as “the foundation of dividing practices that attempt to achieve immunity not only from threatening disease but endangering Others” (ibid.: 416). Health, he argues, “is the language of class” (ibid.: 419, original emphasis), and this is exemplified by sugar abstinence, which draws a classed (raced, gendered) boundary between the ‘good’ citizenship of the abstainer and the perilous over-consumption of the chaotic consumer of sugar. This is premised on the exclusion of the social and environmental inequalities that delimit access to healthful food and foodways in favour of the individualised acts of informed self-control through which the ‘good’, sugar-denying citizen is fashioned.

Conclusion

This paper has explored the ways in which sugar has become a 21st century dietary nemesis, with its ‘empty’ calories and deleterious metabolic effects held culpable for a panoply of expensive and debilitating non-communicable diseases. The rise of anti-sugar campaigns at the global and national levels, and the sedimenting of anti-sugar sentiment in the public domain, has created fertile ground for the burgeoning genre of popular sugar abstention narratives. By focusing on three different modes of sugar abstention – evangelical, experimental and charitable – this paper has explored the ways in which, far from being ‘empty’, sugar (and its abstention) is laden with social meaning, emerging as an over-determined node for contemporary anxieties about health, consumption and self-hood, and a privileged site of identity production and self-entrepreneurship that far exceeds any perceived health benefits. The social benefits of sugar abstention have been shown not only to accrue to those already occupying privileged social positions, but also to actively reproduce those social hierarchies by dislocating the act of giving up sugar from the social, economic and environmental inequalities in which it is embedded.

This dislocation can be understood as the combined outcome of the nutritionism inherent in the positing of a single-nutrient solution (giving up sugar) to complex health and social problems, and of healthism’s conflation of practices of self-care with good citizenship and empowerment. This framing enables those who are already privileged to capitalise on that privilege through self-oriented projects of consumption and displays of informed self-control in ways that have been rendered legible by the demonisation of sugar in health policy and practice. This simultaneously reproduces

class boundaries in ways that render invisible the vast inequalities in access to food, health care and safe, healthful environments that characterise the lives of those who are excluded from the self-entrepreneurial possibilities of sugar abstention. Self-congratulatory accounts of giving up sugar, therefore, operate both as the (unacknowledged) display of privilege and the means of its reproduction and entrenchment. As Guthman argues in relation to the alternative food movement, it is this self-congratulatory aspect “that is perhaps most consequential for social justice, since it limits what is put on the table politically” (2011: 193).

With this warning in mind, this paper signals the need to resist the rush to intervention, and instead to think more inclusively not only about what can be brought to the table, but also who is invited to join, or indeed initiate, those discussions. This aligns with the insistence within both critical nutrition studies and fat studies on the need to look beyond the evaluation of bodies based on what people are eating, and to focus instead on how and why food and other embodied choices are made (or constrained), to what effects and in relation to what socio-economic priorities and challenges (Metzl and Kirkland 2010; Guthman 2011; Hayes-Conroy and Hayes-Conroy 2013a). It is also an invitation to “dethrone health from its position of false neutrality” (Kirkland 2010: 198) by thinking critically about the way it is mobilised in the attack on sugar and to what means and ends. To leave the task of articulating the ‘problem’ of sugar to those already best positioned to accrue capital through its repudiation is to risk exacerbating health and social inequalities rather than ameliorating them.

ⁱ This terminology follows the 2002 Joint WHO / FAP Expert Consultation on Diet Nutrition and the Preventions of Chronic Diseases. ‘Free sugars’ includes “all monosaccharides and disaccharides added to foods by the manufacturer, cook or consumer, plus sugars naturally present in honey, syrups and fruit juices” (cited in WHO 2015: 1).

References

- Action on Sugar. (2017). "Action on Sugar." Retrieved 12 September, 2017, from <http://www.actiononsugar.org/146034.html>.
- Alkon, A. (2013) Food justice and nutrition: a conversation with Navian Khanna and Hank Herrera. In Hayes-Conroy, A. and Hayes-Conroy, J. (eds) Doing Nutrition Differently: Critical Approaches to Diet and Dietary Intervention. London: Routledge. pp 23-38.
- Atkins, R. (2003) Dr Atkins New Diet Revolution. London: Random House.
- Audette, R. and T. Gilchrist (1999) Neanderthin: Eat Like a Caveman to Achieve a Lean, Strong, Healthy Body. New York: St Martin's Press.
- Avena, N., Rada, P. and Hoebel, B. (2008) Evidence for sugar addiction: behavioral and neurochemical effects of intermittent excess sugar intake, Neuroscience and Biobehavioral Reviews, 32, 1, 20-39
- Bennett, C. and Sinatra, S. (2007) Sugar Shock: How Sweets and Simple Carbs Can Derail Your Life - and How You Can Get Back on Track. New York: Berkeley Books.
- British Heart Foundation. (2017) Dechox. Retrieved 3 July, 2017, from <https://dechox.bhf.org.uk>
- Campbell, T. and Jacobson, H. (2014) Whole: Rethinking the Science of Nutrition. Dallas, TX: BenBella Books
- Campbell, D. (2016) National Obesity Forum faces backlash over 'dangerous' diet advice. Retrieved 25 September, 2017 from

<https://www.theguardian.com/society/2016/may/28/national-obesity-forum-advice-fat-dangerous>

Cancer Research UK. (2017a) Sugar Free February. Retrieved 3 July, 2017 from <http://www.cancerresearchuk.org/support-us/find-an-event/sugar-free-february>

Cancer Research UK. (2017b). "Sugar Free February Fundraising Ideas." Retrieved 14 September, 2017 from

http://www.cancerresearchuk.org/sites/default/files/downloadable-resources/g1331_cruk_sfffund.pdf.

Carpenter, L. (2014) Life without sugar: one family's 30-day challenge. Retrieved 19 September, 2017 from <https://www.theguardian.com/lifeandstyle/2014/mar/14/life-without-sugar-family-challenge-diet>

Carpenter, M. (2014) Caffeinated: How our Daily Habit hooks, Helps and Hurts Us. London: William Collins.

Change for Life. (2017) Sugar. Retrieved 12 September, 2017 from <https://www.nhs.uk/change4life-beta/food-facts/sugar - PcuzmXCo5dPZZK2y.97>

Cordain, L. (2011) The Paleo Diet (Revised Edition): Lose weight and get healthy by eating the foods you were designed to eat. Boston: Houghton Mifflin Harcourt

Crawford, R. (1980) Healthism and the medicalization of everyday life, International Journal of Health Services, 10, 3, 365-388

Crawford, R. (2006) Health as a meaningful social practice, Health: an Interdisciplinary Journal for the Social Study of Health, Illness and Medicine, 10, 4, 401-420

Dufty, W. (1975) Sugar Blues. New York: Hachette Book Group

- Erbentraut, J. (2017). No, food stamp users aren't buying 'lots' of soda. Retrieved 14 September, 2017 from http://www.huffingtonpost.com/entry/food-stamps-soda-purchases_us_587e757be4b0cf0ae88068fe
- Evans, B., Colls, R. and Hörschelmann, K. (2011) 'Change4Life for your kid': embodied collectives and public health pedagogy, *Sport, Education and Society*, 16, 3, 323-341
- Farrell, A. (2011) *Fat Shame: Stigma and the Fat Body in American Culture*. New York: New York University Press.
- Freidberg, S. (2004) *French beans and Food Scares: Culture and Commerce in an Anxious Age*. New York: Oxford
- Gard, M. and Wright, J. (2005) *The Obesity Epidemic: Science, Morality and Ideology*. London: Routledge.
- Gearhardt, A., Grilo, C., DiLeone, R., Brownell, K. and Potenza, M. (2011) Can food be addictive? Public health and policy implications, *Addiction*, 106, 1208-1212
- Gill, R. (2000) Discourse Analysis. In Bauer, M.W. and Gaskell, G. (eds) *Qualitative Researching with Text, Image and Sound: A Practical Handbook*. London: Sage Publications. pp. 172-190
- Gillespie, D. (2008) *Sweet Poison: Why Sugar Makes Us Fat*. London: Penguin
- Gillespie, D. (2017) David Gillespie. Retrieved 13 September, 2017 from <http://davidgillespie.org>
- Gunnarsson, A. and Elam, M. (2012). Food fight! The Swedish low-carb / high fat (LCHF) movement and the turning of science popularisation against the scientists, *Science as Culture*, 21, 3, 315-334.
- Guthman, J. (2007) Commentary on teaching food: Why I am fed up with Michael Pollan et al., *Agriculture and Human Values*, 24, 261-264

- Guthman, J. (2011) *Weighing In: Obesity, Food Justice and the Limits of Capitalism*. Berkeley: University of California Press
- Guthman, J. (2014) Doing justice to bodies? Reflections on food justice, race and biology, *Antipode*, 46, 5, 1153-1171
- Harper, A. (2013) Doing veganism differently: racialized trauma and the personal journey towards vegan healing. In Hayes-Conroy, A. and Hayes-Conroy, J. (eds) *Doing Nutrition Differently: Critical Approaches to Diet and Dietary Intervention*. London: Routledge. pp. 133-147
- Hatch, A. R. (2016) *Blood Sugar: Racial Pharmacology and Food Justice in Black America*. Minneapolis: University of Minnesota Press
- Hayes, M. (2017) How to quit sugar this year: 'It's a lifestyle change, not a diet'. Retrieved 19 September, 2017 from <https://www.theguardian.com/lifeandstyle/2017/jan/07/how-to-quit-sugar-this-year-diet>
- Hayes-Conroy, A. and Hayes-Conroy, J. (eds) (2013a). *Doing Nutrition Differently: Critical Approaches to Diet and Dietary Intervention*. London: Routledge.
- Hayes-Conroy, A. and Hayes-Conroy, J. (2013b) Introduction. In Hayes-Conroy, A. and Hayes-Conroy, J. (eds) *Doing Nutrition Differently: Critical Approaches to Diet and Dietary Intervention*. London: Routledge. pp. 1-20.
- Jauho, M. (2016) The social construction of competence: conceptions of science and expertise among proponents of the low-carbohydrate high-fat diet in Finland, *Public Understanding of Science*, 25, 332-345
- Keys, A. (1980) *Seven Countries: A Multivariate Analysis of Death and Coronary Heart Disease*. London: Harvard University Press.

- Kirkland, A. (2010) Conclusion: What next? In Metzl, J. and Kirkland, A. (eds) *Against Health: How Health Became the New Morality*. New York: New York University Press. pp. 195-203.
- Knight, C. (2011) 'Most people are simply not designed to eat pasta': evolutionary explanations for obesity in the low-carbohydrate diet movement. *Public Understanding of Science*, 20, 5, 706-719
- Knight, C. (2015) 'We can't go back a hundred million years', *Food, Culture and Society*, 18, 3, 441-461
- Kromhout, D. (2016) National Obesity Forum report is flawed, *British Medical Journal*, 353, 3324
- Lustig, R. (2009) *Sugar: The Bitter Truth*. Retrieved 21 September, 2017 from <https://www.youtube.com/watch?v=dBnniua6-oM>
- Lustig, R. (2014) *Fat Chance: The Hidden Truth About Sugar, Obesity and Disease*. London: Fourth Estate.
- Mayes, C. (2016) *The Biopolitics of Lifestyle: Foucault, Ethics and Health Choices*. London: Routledge
- Metzl, J. (2010) Introduction: why against health? In Metzl, J. and Kirkland, A. (eds) *Against Health: How Health Became the New Morality*. New York: New York University Press. pp. 1-11.
- Metzl, J. and Kirkland, A. (eds) (2010) *Against Health: How Health Became the New Morality*. New York: New York University Press.
- Mintz, S. (1985) *Sweetness and Power*. London: Penguin
- Moore, S. (2016). 'My life is basically over' - 14 days on a sugar-free diet. Retrieved 19 September, 2017 from <https://www.theguardian.com/lifeandstyle/2016/feb/08/suzanne-moore-sugar-free-diet>

Moore, S. E. H. (2008) *Ribbon Culture: Charity, Compassion and Public Awareness*.
Houndmills: Palgrave

Mosley, M. (2015) *The 8-Week Blood Sugar Diet: Lose Weight Fast and
Reprogramme Your Body*. London: Short Books

Moss, M. (2013) *Salt, Sugar, Fat: How the Food Giants Hooked Us*. London: Random
House

Mowbray, N. (2014) *Sweet Nothing: Why I Gave Up Sugar and How You Can Too*.
London: Orion

Nettleton, S. and Hardey, J. (2006) Running away with health: the urban marathon
and the construction of 'charitable bodies', *Health*, 10, 4, 441-460

News24.com (2013) Tim Noakes' weight-loss paper sparks row. Retrieved on 25
September, 2017 from [http://www.news24.com/Archives/City-Press/Tim-Noakes-
weight-loss-paper-sparks-row-20150429](http://www.news24.com/Archives/City-Press/Tim-Noakes-weight-loss-paper-sparks-row-20150429)

Noakes, T. (2013) Low-carbohydrate and high-fat intake can manage obesity and
associated conditions: occasional survey, *South African Medical Journal*, 103, 11,
826-830.

Noakes, T., Proudfoot, J. and Creed, S. A. (2015) *The Real Meal Revolution: The
Radical, Sustainable Approach to Healthy Eating*. London: Robinson

NOF (2016) *Eat Fat, Cut the Carbs and Avoid Snacking to Reverse Obesity and
Type 2 Diabetes*. London: National Obesity Forum, in association with Public Health
Collaboration.

Otto, M. (2017) *Teeth: the Story of Beauty, Inequality and the Struggle for Oral Health
in America*. New York: The New Press [Kindle version]

PHE (2015) *Sugar Reduction: the Evidence for Action*. London, Public Health
England.

- Pollan, M. (2006) *The Omnivore's Dilemma: the Search for a Perfect Meal in a Fast-Food World*. London: Bloomsbury
- Pollan, M. (2008) *In Defense of Food: An Eater's Manifesto*. London: Penguin
- Rose, N. (2007) Molecular biopolitics, somatic ethics and the spirit of biocapital, *Social Theory and Health*, 5, 3-29
- Rothblum, E. and Solovay, S. (eds) (2009) *The Fat Studies Reader*. New York: New York University Press.
- SACN (2015) *Carbohydrates and Health*. London: The Stationery Office
- Saguy, A. C. (2013) *What's Wrong with Fat?* Oxford: Oxford University Press.
- Schaub, E. (2014) *Year of No Sugar: A Memoir*. Naperville, Ill: Sourcebooks, Inc
- Scrinis, G. (2015) *Nutritionism: The Science and Politics of Dietary Advice*. New York: Columbia University Press.
- Steward, H., Bethea, M., Andrews, S. and Balart, L. (2003) *The New Sugar Busters! Cut Sugar to Trim Fat*. New York: Ballantine Books
- Strutner, S. (2017) I gave up added sugar for a month and this is what happened. Retrieved 19 September, 2017, from http://www.huffingtonpost.com/entry/quitting-sugar_us_58e544f7e4b0fe4ce087c854
- Sugarwise. (2017) Sugarwise. Retrieved 12 September, 2017 from <http://sugarwise.org>
- Super Size Me. (2004) [DVD]. Directed by Spurlock, M. New York: Hart Sharp Video.
- Taubes, G. (2010) *Why We Get Fat And What To Do About It*. New York: Anchor Books
- Taubes, G. (2017) *The Case Against Sugar*. London: Portobello Books

- That Sugar Film. (2014) [DVD] Directed by Gameau, D. Australia: Madman Production Company
- The Big Fat Fix. (2016) [video]. Produced by O'Neill, D and Malhotra, A. London. Available for download at: <http://www.thebigfatfix.com>
- Throsby, K. (2012) Obesity surgery and the management of excess: exploring the body multiple, *Sociology of Health and Illness*, 34, 1, 1-15
- Throsby, K. (2016) *Immersion: Marathon Swimming, Embodiment and Identity*. Manchester: Manchester University Press.
- Titmuss, R. M. (1971) *The Gift Relationship: from Human Blood to Social Policy*. New York: Vintage Books
- Tomrley, C. and Kaloski Naylor, A. (eds) (2009) *Fat Studies in the UK*. York: Raw Nerve Books.
- Westwater, M., Fletcher, P. and Ziauddeen, H. (2016) Sugar addiction: the state of the science, *European Journal of Nutrition*, 55, Supplement 2, S55-S69
- WHO (2015). *Guideline: Sugars Intake for Adults and Children*. Geneva: World Health Organisation
- Wilson, S. (2014) *I Quit Sugar: Your Complete 8-Week Detox Program and Cookbook*. London: Macmillan
- Wilson, S. (2017) A bit about Sarah. Retrieved 13 September, 2017 from <http://www.sarahwilson.com/about/>
- Wood, L. A. and Kroger, R. O. (2000) *Doing Discourse Analysis: Methods for Studying Action in Talk and Texts*. London: Sage
- Yudkin, J. (2012) *Pure, White and Deadly: How Sugar is Killing Us and What We Can Do to Stop It*. London: Penguin Life

Ziauddeen, H., Farooqi, I. and Fletcher, P. (2011). Obesity and the brain: how convincing is the addiction model?, *Nature Reviews: Neuroscience*, 13, 279-286

Ziauddeen, H. and Fletcher, P. (2013) Is food addiction a valid and useful concept?, *Obesity Reviews*, 14, 19-28