# Enacting knowledge, power, and equity: understanding the public appetite for preventive obesity regulations

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#### **Abstract**

This thesis critically examines public views about the use of preventive obesity regulations in Australia. An extensive body of social science scholarship has demonstrated that the dominant neoliberal ideology of healthism has engendered anxiety in the public imagination about the obesity epidemic, as well as perpetuating an intensely moral discourse of personal responsibility for obesity. How public support for regulatory interventions is generated in this ideological and emotionally-charged climate has not yet been established.

This is important in the context of increasing calls from public health advocates for regulatory interventions to address obesity and attenuate the disproportionate burden on those of lower socio-economic circumstances. As regulations are controversial in the prevailing neoliberal political context, public support is wielded by advocates as valuable political currency.

A mixed-methods research program within a critical public health framework was undertaken to examine public views. First, the role of emotions in shaping the discourses that underpin public views were examined through an affective-discursive analysis of comments attached to online news articles about preventive obesity regulations. Focus groups were then conducted to identify how dominant ideological and discursive framings of regulations reflect the experiences of disparate socio-economic groups, which are differentially configured as 'at risk' of obesity in public health scholarship. Finally, a representative cross-sectional survey was conducted to ascertain levels of support for specific regulations, and to interrogate socio-demographic variations in views.

Extending Wright and Harwood's (2009) concept of biopedagogy, I argue that in the prevailing neoliberal context obesity is widely read as a morally reprehensible embodiment of ignorance. As such, broad public support for preventive obesity regulations is generated through the capacity of these measures to correct perceived knowledge deficits and to institute moral culpability. My findings demonstrate that public support for regulations is enmeshed with classed and gendered norms that actively (re)produce ignorance as the cause of obesity, by legitimising and privileging certain lifestyles and forms of knowledge.

Key to my argument is the ways in which neoliberalism and healthism have created an environment in which 'the public' as a collective body are positioned as victims of the obesity epidemic. I show how this collectivisation, in concert with expert public health knowledges which locate the obesity problem in the problematised behaviours of those from low socio-economic conditions, engenders support for interventions which incite people to behave in ways that align with distinctly classed and gendered imperatives around body weight and diet.

Through a critical examination of public views, this thesis provides new knowledge about how preventive obesity regulations extend the responsibilisation and moralisation of individuals in relation to obesity. I argue that the deployment of claims of public support for regulations in public health advocacy is contingent upon a constellation of knowledge/ignorance/power that precludes the insights of those from low socio-economic conditions from obesity policy development. This forecloses consideration of possibilities for effective and equitable resolution to the obesity problem, and thereby undermines the emancipatory potential of preventive obesity regulations.

#### **Declaration**

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Lucy Farrell	Date

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# Abbreviations and acronyms

The following is a list of frequently used abbreviated terms. All terms are written in full the first time they appear.

ABS Australian Bureau of Statistics

AFGC Australian Food and Grocery Council

ANPHA Australian National Preventive Health Agency

AoIR Association of Internet Researchers

BMI Body Mass Index

COAG Council of Australian Governments

FSANZ Food Standards Australia and New Zealand

GST Goods and Services Tax

HSR Health Star Rating

IRSD Index of Relative Socio-economic Disadvantage

LGA Local Government Area

NHMRC National Health and Medical Research Council

OBPR Office for Best Practice Regulation

OECD Organisation for Economic Co-operation and

Development

Opal Obesity Prevention and Lifestyle

PEACH Parenting, Eating and Activity for Child Health

RIA Regulation Impact Assessment

SNAP Smoking, Nutrition and Physical Activity

WHO World Health Organization

WPR What's the Problem Represented to Be?

#### Introduction

#### Is it time for a sugar tax?

On the ABC Radio National program the *Health Report* in April 2017, four prominent Australian obesity policy advocates discussed the possible use of tax on soft drinks to combat Australia's obesity epidemic. The guests explained that to date in Australia, public health campaigns have sought to educate the public about preventing obesity. However, they continued, education is not sufficient to halt the epidemic. Regulations – interventions that seek to influence behaviour through the rule of law – are required, with a tax on sugary drinks being just one example.

Changing dietary behaviours is a complex undertaking, the panellists explained. The amount of sugar in the average Australian's diet has gradually and surreptitiously increased in recent decades, as a result of the food industry driving demand for cheap, highly processed foods and drinks. We now live in an 'obesogenic environment' in which we are constantly barraged with products that are detrimental to our health. The ubiquity of these perverse influences on our modern diets mean that, according to the panel, many people may not in fact know that they are consuming high volumes of sugar:

I mean, if you take a bottle of one particular barbecue sauce, it's got over 100 teaspoons of sugar in it. The average person will not know there's 10 teaspoons of sugar in their Coke. Imagine if you saw them in a coffee shop and they've got their cappuccino and they are tipping in 10 teaspoons of sugar, you'd think, my goodness, they're nuts.

1

As such, regulations which alter the obesogenic environment – like a sugar tax – are seen to be the best way to tackle unhealthy dietary influences that lie beyond individuals' control. By acting on the environmental drivers of unhealthy eating behaviours, regulations are argued to help individuals to negotiate the complexity of the environment when making choices about what to eat.

I was interested to hear the panel describe the role of a sugar tax in addressing health inequalities. In Australia, as elsewhere, stark health disparities exist between the rich and poor, and obesity is more common among poorer groups. According to the panel, a sugar tax will disproportionately benefit low income groups, by affording them the opportunity to make healthy choices. With socioeconomic disadvantage a distal determinant of obesity, the potential for a sugar tax to impose additional hardship on those already living in poverty was acknowledged. The panellists argued that this is outweighed by the promise of future health:

We know that low income groups are more sensitive to price, but they are the groups who have the most to gain. That's often why people will argue against the tax, they'll say, well, it's retrogressive, it will hurt the poor most. Well, the point is, if you can get those that have least income actually to give up, they can use that money for much healthier alternatives.

I questioned why low-income groups – in the interest of whose health sugar taxes are sought – would describe a sugar tax as harmful, rather than helpful. How did advocacy for a sugar tax reflect the voice of low income groups?

According to a recent report from public policy think tank The Grattan Institute, a tax on sugary drinks would reduce consumption by about 15 percent – more in low income areas – and may also have a small impact on obesity rates (Duckett *et al.*, 2016). But it's not just about health: a sugar tax would generate up to half a billion

dollars annually that could help to pay for the costs that obesity imposes on the community.

For these reasons, the Greens – the progressive 'third party' of Australian politics – have pushed for the introduction of a sugar tax in Australia, with the introduction of a 20 per cent tax on soft drinks one of the party's 2016 federal election platforms. Pointing to a delicate political balance between addressing socio-ecological drivers of soft drink consumption and informing individuals' choices, the Greens' sugar tax policy statement argues:

Of course, the choice of what to eat or drink, is a personal one, and should remain so. A slight rise in the price of the most harmful, least nutritious foodstuffs available will simply send a signal – 'think twice' (Di Natale, 2016).

But a sugar tax remains politically contentious. In the prevailing neoliberal political economy, a sugar tax is commonly rejected by industry groups and those on the right of politics – and increasingly those on the left – as an impediment to the efficient operation of free markets. With markets premised on rational choices made by self-interested individuals, a sugar tax is seen as an unwarranted interference into individuals' rights to choose what they eat and drink. The measure has thus been derided as moralistic for privileging the pursuit of health over other matters of social and economic importance. Australia's then-Deputy Prime Minister Barnaby Joyce echoed these tropes recently in response to mounting advocacy for a sugar tax (Davey, 2016):

This would cause massive problems as we have basically another moralistic tax coming in onto food production.

If you want to deal with being overweight, here's a rough suggestion: stop eating so much, and do a bit of exercise. There's two bits of handy advice.

Take responsibility upon yourself. The Australian Taxation Office is not going to save your health. Do not go to the ATO as opposed to going to your doctor or putting on a pair of sand shoes and walking around the block. So get yourself a robust chair and a heavy table and, halfway through the meal, put both hands on the table and just push back. That will help you lose weight.

Acknowledging the difficulties of achieving regulatory reform in this neoliberal political environment, the panellists on the *Health Report* radio program described the passage to successful implementation of regulations in other areas of public health such as tobacco control. Generating public acceptance of regulatory reform was nominated as the key to navigating these political tensions, with public health advocacy needed to steward public support:

It's interesting when you look at this historically, at most of the really effective public health interventions, there's been an enormous amount of build up to building the pressure, building community support for this, trying to get senior decision makers on side.

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I begin with this discussion of the possible implementation of a tax on sugary drinks in Australia in order to introduce some of the key themes this thesis explores. First, the radio program establishes an urgent need for regulations. Widespread acceptance that obesity is a threat to health and economic prosperity, along with recognition that self-responsibilising approaches based on public education are inadequate to rein in the threats posed, have mobilised advocacy for regulations. The emphasis on the role of regulations in facilitating healthy choices, rather than restricting choice, highlights how neoliberal logics of choice have become intermingled with public health policy. In this thesis, I explore the ways in which this ideological and emotionally-charged environment influences public support for regulations. In doing so, I consider the issues of power and hegemonic

values which have shaped beliefs about which regulatory possibilities are viable and efficacious.

Second, the discussion introduces the ways in which un/knowing about obesity is engendered within obesogenic environments, and the ways in which different attributions of un/knowing shape possibilities for regulation. With the opportunity to acquire or act upon knowledge about healthy eating described in the above excerpts as being impacted by socio-ecological factors, a sugar tax was positioned as a signal to 'think twice' about soft drink consumption: that is, as a mechanism to enact knowledge. In this thesis, I analyse the interplay between socio-ecological features and the transmission of knowledge about what is healthy, and explore how this focus on obesogenic environments obfuscates local knowledges about food and health.

In particular, I pick up on the key theme of the role of public support in health policy development, and consider the role of public opinion and expert knowledges in implementing public health policy. This involves a focus on the ways in which public health knowledges can discount the values and experiences of socio-economically disadvantaged groups, for whom regulations are intended to bestow greatest benefit. The commitment to achieving health equity through regulations described in the above radio program excerpts is part of the social determinants of health agenda dominating current public health research and practice. In justifying the immediate hardships that a sugar tax would impose on disadvantaged individuals in terms of future health benefits for deprived groups, the presumed universal value of health is demonstrated. The tensions between individual/collective and present/future wellbeing that underscore this assumption point to the contradictions of pursuing health equity through

regulations which necessarily entail the transformation of other – variably valued – non-health social realms. This reveals a need for greater attention to the ways in which disadvantaged groups configured as 'at risk' of obesity in mainstream public health scholarship conceive the threat of obesity, and the trade-offs these groups make in resolving the obesity problem compared with other factors of concern.

Together, the themes of this thesis are united by a focus on the ways in which public support for regulatory interventions is informed by, and reproduces, neoliberal logics of self-responsibilisation and choice. In particular, I am concerned with how the broader social and political contexts of obesity position preventive obesity regulations as a means of responsibilising certain social groups to improve their health, and with understanding whose knowledge counts when tackling socio-economic inequalities in obesity.

#### The research context

#### Identifying a role for regulations

The current momentum for the implementation of preventive obesity regulations in Australia is the culmination of three decades' advocacy and research into the socio-ecological determinants of obesity. In 1997, the World Health Organization (WHO) held a consultation with international experts to identify the extent of obesity and plan a coherent approach to its prevention and management on a global scale, stating '[t]he amount of suffering that obesity causes, and the money spent by health agencies in dealing with it, are enormous and reinforce the need for urgent action' (WHO, 2000). That same year, Egger and Swinburn's pioneering paper *An 'Ecological' Approach to the Obesity Pandemic* was published in the *BMJ*.

The paper argued for a paradigm shift in obesity prevention, given that the average Australian's weight has continued to rise 'in the face of increasing knowledge, awareness, and education about obesity, nutrition, and exercise' from health promotion messages which cajole people to balance their calorie intake and output (Egger & Swinburn, 1997, 477). Introducing the 'obesogenic environment' thesis to explain obesity as resulting from modern urban environments which encourage passive overconsumption of energy-dense foods and sedentary lifestyles, the paper conceptualised obesity prevention as a socio-ecological endeavour requiring 'more than simple education about risk factors and need[ing] a collaborative strategy with the multiple sectors which impact on the problem' (Egger & Swinburn, 1997, 477).

Reflecting this paradigm shift, Australian policy reports have been calling for socio-ecologically oriented action on obesity led by Commonwealth and state and territory governments for the past three decades (see Figure 1 for a chronological timeline of federal government reports and regulatory action on obesity). The suite of possible interventions includes 'soft' approaches designed to make environments more conducive to healthy choices, as well as 'hard' enforceable policies in the form of legislation, regulations, and fiscal instruments – hereafter referred to simply as 'regulations' – to alter the physical, social, and economic environments impacting obesity (Swinburn & Egger, 2002).

For instance, the National Health and Medical Research Council's (NHMRC)

Acting on Australia's Weight report, released in 1997, was the first national action plan for obesity. The report declared obesity a growing concern and called for concerted action in the form of socio-ecological interventions such as improvements to the range of food options available in workplaces, school and

Figure 1: Timeline of Australian obesity policy reports, strategies, inquiries and laws

1997	Release of NHMRC report Acting on Australia's Weight: A Strategic Plan for the Prevention of Overweight and Obesity
2002	Establishment of the National Obesity Taskforce
2003	Release of Healthy Weight 2008: Australia's Future: The National Action Agenda for Children and Young People and their Families
2006	Release of Healthy Weight for Adults and Older Australians: A National Action Agenda to Address Overweight and Obesity in Adults and Older Australians
2006	Protecting Children from Junk Food Advertising Bill introduced to the Senate
2007	Establishment of the National Preventative Health Taskforce
2008	National Health and Hospital Reform Commission established
2008	Obesity designated as a National Health Priority Area
2008	National Partnership Agreement on Preventive Health signed
2008	House of Representatives Standing Committee on Health and Ageing <i>Inquiry</i> into Obesity in Australia
2008	Protecting Children from Junk Food Advertising (Broadcast Amendment) Bill reintroduced to the Senate
2009	Release of Weighing It Up: Obesity in Australia report from the House of Representatives Inquiry into Obesity in Australia
2009	Release of National Health and Hospital Reform Commission report A Healthier Future for All Australians
2009	Release of the National Preventative Health Taskforce's preventive health strategy Australia: The Healthiest Country by 2020
2009	Food and Health Dialogue established
2010	Release of <i>Taking Preventative Action: A Response to Australia: The Healthiest Country by 2020</i> from the Commonwealth Government
2010	Protecting Children from Junk Food Advertising (Broadcast Amendment) Bill reintroduced to the Senate
2011	Establishment of the Australian National Preventive Health Agency
2011	Protecting Children from Junk Food Advertising (Broadcast Amendment) Bill reintroduced to the Senate
2011	Release of Labelling Logic: Review of Food Labelling Law and Policy
2014	Abolition of the Australian National Preventive Health Agency
2014	Abolition of the National Partnership Agreement of Preventive Health
2014	Health Star Rating implemented
2015	Healthy Food Partnership established

community environments, urban planning reform to encourage incidental activity, and enhanced food labelling. Behavioural health promotion interventions, the development and promotion of national guidelines for nutrition and physical activity, and education campaigns were also recommended (NHMRC, 1997).

Since then, a National Obesity Taskforce charged with developing a national action plan for addressing overweight and obesity was established in November 2002 under the Howard Liberal Government, with its report *Healthy Weight 2008*, *Australia's Future: The National Action Agenda for Children and Young People and Their Families* released in 2003 (Department of Health and Ageing, 2003). In 2006, a related strategy *Healthy Weight for Adults and Older Australians: A National Action Agenda to Address Overweight and Obesity in Adults and Older Australians* was released (Department of Health and Ageing, 2006). These reports called for socio-ecological interventions in the form of urban planning restrictions on food outlet density, improved fresh food supply to remote and rural communities, food reformulation and portion size restrictions, and environmental safety measures.

The period from 2008 to 2012 saw significant political investment in relation to obesity prevention under the Rudd/Gillard Labor Government. In 2008, obesity was designated as a National Health Priority Area at the Australian Health Ministers' Conference (Department of Health, 2008), and the Council of Australian Governments¹ (COAG) signed the National Partnership Agreement on Preventive Health. This established a Commonwealth policy and funding framework to support a series of initiatives addressing 'smoking, nutrition, alcohol, and physical activity (SNAP) risk factors' (COAG, 2008). The result was the development of a series of socio-ecological initiatives targeting obesity delivered by state and territory governments under the banner of the *Healthy Workers Initiative* and the *Healthy Children Initiative*. These included *Opal (Obesity Prevention and Lifestyle)* in South Australia (SA Health, 2017), *PEACH (Parenting, Eating and Activity for* 

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<sup>&</sup>lt;sup>1</sup> COAG is Australia's intergovernmental forum. Its members comprise the Prime Minister, state and territory Premiers and Chief Ministers, and the president of the Australian Local Government Association.

Child Health) in Queensland (Queensland Health, 2016), and Healthy Together in Victoria (Department of Health and Human Services, 2015). As well, the National Partnership Agreement provided resources for the Measure Up and subsequent Swap It, Don't Stop It social marketing campaigns (COAG, 2008), which I discuss in Chapter One.

The National Preventative Health Taskforce's preventative health strategy *Australia: The Healthiest Country by 2020* (National Preventative Health Taskforce, 2009a), released in 2009, signalled increased momentum for 'hard' regulatory interventions. Recommendations to address obesity included taxation, regulation of food labelling, subsidies for fresh food supply to rural and remote areas, restrictions on marketing unhealthy foods, and urban planning restrictions. These recommendations were supplemented by calls for improved public education and information through social marketing campaigns and school-based programs.

In June 2009, the report from the House of Representatives Standing Committee on Health and Ageing's Inquiry into Obesity in Australia, titled *Weighing It Up:*Obesity in Australia, was tabled in Parliament. Recommendations included a number of regulatory approaches (taxation, restrictions on advertising unhealthy foods to children, urban planning guidelines, and food reformulation). The inquiry also called for a review of food labelling to create a set of standard nutritional information guidelines.

This resulted in a Review of Food Labelling Law and Policy (the 'Blewett Review'), with the final report *Labelling Logic: Review of Food Labelling Law and Policy* handed down in 2011 (Blewett *et al.*, 2011). The review recommended that a traffic light front-of-pack labelling system be developed, to be implemented mandatorily

in some instances. Following negotiations between government, public health, and food industry representatives, a different system using stars (the 'Health Star Rating'; HSR) rather than the recommended traffic lights was implemented on a voluntary basis in June 2014 (Department of Health, 2014a).

#### The ANPHA project

On 1 January 2011, the federal Gillard Labor Government formally launched the Australian National Preventive Health Agency (ANPHA). The agency was developed under the auspices of the COAG National Partnership Agreement on Preventive Health, in line with recommendations from the National Preventative Health Strategy (2009a) and National Health and Hospitals Reform Commission (2009).

The purpose of ANPHA was to drive a preventive health agenda, with an explicit focus on obesity, tobacco, and alcohol consumption (ANPHA, 2011a). As an independent agency, ANPHA was ostensibly free from the commercial interests, risk-averse culture, and ministerial priorities that can impede action on prevention within health departments or by taskforces (Sylvan, 2015). ANPHA was intended to provide leadership in order to promote health among the Australian population, and to reduce health inequalities. This included an emphasis on generating evidence of a role for policy in achieving these objectives. A key strategy was the National Preventive Health Research Grants Program, which sought to 'strengthen evidence based decision making and investigate ways to improve the population's health' (ANPHA, 2011b).

This thesis emerged from an ANPHA grant project entitled *Steward or Nanny*State: Consulting the Public About the Use of Regulations and Laws to Address

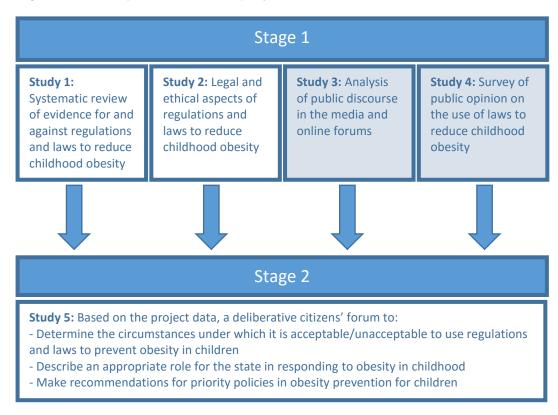
Childhood Obesity (short name: HealthyLaws), which was funded through the inaugural (and ultimately only) Preventive Health Research Grants Program in 2012. This was a multidisciplinary project led by Professor Annette Braunack-Mayer and Dr Jackie Street as Chief Investigators along with nine other investigators, which examined international evidence and employed participatory/deliberative methods in order to identify acceptable and feasible regulations for the prevention of childhood obesity in Australia.

With an undergraduate background in psychology and postgraduate qualifications in journalism, I joined the Social and Behavioural Health Sciences branch of the School of Public Health as one of two PhD students involved in the project. My role was to inform an analysis of public attitudes surrounding the use of regulations to reduce childhood obesity. The specific aspects of the *HealthyLaws* project that my research informed are highlighted in pale blue in Figure 2 below. Findings from my PhD research were integrated into the broader project through a citizens' jury (Study 5 in Figure 2 below), at which I presented findings about the diversity of public views (see Street *et al.*, 2017 for details about the citizens' jury project). Jurors were asked to consider my presentation as part of the evidence upon which they based their deliberations about the acceptability of regulations to address childhood obesity.

#### The demise of the preventive health agenda

It was therefore within the context of apparently escalating political interest in preventive obesity regulations that I embarked upon this PhD project in 2013. However, the change to the conservative Abbott Liberal Federal Government in September 2013 signalled a shift in the political context. In its first national

Figure 2: HealthyLaws research project



budget delivered in May 2014, the new government abolished ANPHA, as well as ceasing the National Partnership Agreement of Preventive Health. There has since been a marked reduction in federal government attention and funding directed to obesity prevention, and disinvestment in preventive health programs has also been observed at the state and territory level (Smith *et al.*, 2016). This includes the withdrawal of funding from the *Opal* program in South Australia from June 2017 (SA Health, 2017; Smith *et al.*, 2016).

Obesity prevention during the Abbott/Turnbull Liberal Governments' tenure has comprised two key approaches: the roll-out of the voluntary HSR system, as described earlier; and the Healthy Food Partnership, established in 2015. This is a public-private partnership between the Australian government, food industry bodies, and public health groups which 'aims to improve the dietary habits of

Australians by making healthier food choices easier and more accessible and by raising awareness of better food choices and portion sizes' (Department of Health, 2015). The Partnership has adopted a voluntary reformulation program, as well as seeking to influence individual behaviour change through consumer education about healthy choices. Public health proponents have criticised the Partnership's failure to manage conflicts of interest and the lack of sanctions imposed for failing to meet voluntary reformulation targets (Jones *et al.*, 2016).

Current Prime Minister Malcom Turnbull and Opposition Leader Bill Shorten have both explicitly rejected calls for more restrictive regulations such as a sugar tax (Bickers, 2017), indicating that such measures are unpalatable in the current Australian political climate. However, the Greens continue to drive efforts for regulatory reform: Greens leader Senator Richard Di Natale is intending to introduce a Private Senator's Bill for a tax on sugary drinks, as well as call for a Senate Select Committee to investigate obesity policy options, within the current parliamentary sitting (The Greens, 2017; personal communication, 24 July 2017). Advocacy for the introduction of regulations also remains strong (Australian Prevention Partnership Centre, 2017; Australian Medical Association, 2018; Obesity Policy Coalition, 2017).

#### Thesis aims

At the centre of this complex political environment is the Australian public. On one hand, industry lobbyists and politicians appeal to notions of 'public opinion' in rejecting regulations as infringements on personal freedoms. On the other hand, it is in the name of the publics' health that preventive obesity regulations are sought by public health advocates. Explaining the influential role of public opinion in

policy processes, Edelman (1977, 50) has described the invocation of 'public opinion' as a form of rhetorical manipulation:

Statements about 'public opinion' help marshal support for particular policies. The term connotes a force independent of government, but a large part of it echoes the beliefs authorities deliberately or unconsciously engender by appealing to fears or hopes that are always prevalent

Somewhat ironically, the voice of the public is often not heard in debates about the use of regulations to address obesity. In this thesis, I aim to draw into question the meaning of 'the public' in relation to the public health issue of obesity and consider which 'publics' are served by public health obesity interventions.

Traditionally, the field of public health has conceptualised the public from an epidemiological perspective as akin to a population; that is, a mass of discrete bodies unified by some intrinsic property (Krieger, 2012). Conversely, the social and political sciences have tended to consider publics as relational social spaces bound together through shared values and ways of thinking (Marsland, 2014; Warner, 2002). As such, Rock (2017) argues that the ways in which 'the public' is invoked in public health practice concerns not only the distribution of people and efforts to improve their health outcomes, but also the ways in which the distribution of power and values shape health and public health interventions.

Through this research, I therefore connect with voices from different publics on the matter of preventive obesity regulations, and engage with the reciprocal dynamics of power and voice that shape the ongoing debate about the appropriateness of regulations in addressing obesity. The overarching aim of this thesis is to examine how certain regulatory interventions addressing obesity come to be endorsed in public discourse. To achieve this, I am interested in the following questions:

- How do dominant discourses and the ideological environment influence public support for certain regulations?
- How do public views about preventive obesity regulations (re)produce social power relations?

#### Clarifications on terminology

Critical research examining obesity/weight/fat is entangled within the cultural environments constituting 'obesity' (that is, medicalised concern with 'excess' weight) as a site for investigation. The choice of terminology adopted is therefore important, as this may (re)produce contingent and problematic relations of power (Warin & Gunson, 2013). Some critical scholars prefer the term 'fat' to eschew the medicalisation of larger bodies, and to render fat as ordinary (LeBesco, 2004; Wann, 2009). In this thesis, my concern is with current intense public health concern about obesity. I therefore adopt the term obesity (as well as related terminology of an obesity epidemic, crisis, or problem) in order to situate the research within this policy context. For practicality, I do not mark these terms with single quotation marks. However, my use of these terms is problematised throughout the entire thesis.

#### Thesis structure

This thesis is presented as a combination conventional/publication format. This is an alternative to the standard thesis format, which comprises a combination of written narrative and scholarly articles published in, or under review for publication in, peer-reviewed journals. The thesis comprises a background chapter

incorporating a review of the extant literature on the role of public opinion in preventive obesity policy (Chapter One), a theoretical orientation chapter (Chapter Two), and a methodology chapter (Chapter Three) in a conventional structure in order to explain the policy and theoretical contexts for the study, and to describe the research process. The findings chapters (Chapters Four to Six) include three articles that have been published in peer-reviewed journals or are currently under review. Introducing each of these chapters is a contextual statement describing how the articles develop the original contribution to knowledge, as well as providing specific theoretical and methodological context for the individual studies. Chapter Seven concludes the thesis, synthesising themes from the research and identifying the theoretical and policy implications.

The remainder of this thesis is organised as follows: in **Chapter One** I describe the ideological context for the implementation of obesity regulations, and examine the role of public opinion in the regulatory reform process. Public health knowledges have constituted obesity as a public health crisis, for which regulations are necessary and efficacious solutions. Drawing upon socio-ecological explanations for obesity, these interventions act at the population level rather than on individuals' behaviours. Advocates argue that regulations thereby overcome the shortcomings of individually-targeted behavioural health promotion approaches, which direct moral blame to obese individuals and may perpetuate health inequities. Research on obesity discourse and the neoliberal ideology of healthism provide a warrant to critically explore public views about obesity policy. I argue that there is a need to engage with different publics – differentially problematised in relation to obesity – in order to understand how regulations may perpetuate dominant obesity discourses and existing social power structures.

In **Chapter Two**, I draw on neo-Foucauldian scholarship to describe how certain knowledges position obesity as harmful to the future nation, rendering it governable. I introduce the theme of biopedagogy (Wright & Harwood, 2009) to generate a discussion of how regulations are 'practice[s] of teaching life' (Harwood, 2009, 21), reliant upon certain truth claims and relations of (pedagogical) power. This discussion builds upon literature exploring the biopedagogical practices of health promotion to argue there is a need for critical analysis of how regulatory policies integrate with neoliberal imperatives to responsibilise certain problematised populations.

In **Chapter Three** I describe the research design and methods. I begin with a discussion of the epistemological challenges of research into public views, and reflect on the power relationships embedded within public opinion research. As such, a problematisation approach guided the process of data collection and analysis. This involved particular emphases on the role of emotion in configuring obesity as a problem, and on scrutinising socio-demographic variations in views between problematised and non-problematised populations. To conclude the chapter, I explain the sequential mixed-methods design, which includes an analysis of reader comments attached to online news articles, focus groups, and a cross-sectional survey.

The empirical research contributing to this thesis is presented in publication format in Chapters Four, Five and Six. In **Chapter Four**, I apply Ahmed's (2009) concept of affective economies to argue that emotion within obesity discourse operates to engender support for regulations which direct moral blame to individuals. I show how intense anxiety and opprobrium about obesity shape collective bodies through processes of social abjection. These emotions articulate a

principled and valued position for those virtuous citizens aggrieved by obesity, and thereby legitimate the use of regulations to protect the (principally economic) interests of the body politic. I argue that governments' use of regulations to address obesity can be understood within a discourse of moral culpability and individual responsibility. This is in tension with the explicitly socio-ecological rationale for these measures in public health discourse.

Chapter Five explores how views about the types of regulations that are most appropriate to address obesity are shaped by classed norms associated with food and health. This chapter employs Tuana's (2004, 2006) work on the politics of ignorance to show how obese people, and those from lower socio-economic conditions who are commonly problematised in relation to obesity, are actively constructed as ignorant about healthy eating. As such, particular regulatory approaches are endorsed for their capacity to both educate about what is healthy, as well as to constrain poor choices. This narrative serves to reinforce the privilege of those in higher social strata, by maintaining silence around alternative views of obesity that challenge the relational foundations of social inequities. I argue that public health policy actors must direct specific attention to the ways in which disadvantaged communities understand the relationship between socio-economic status and obesity. Otherwise, regulations implemented to address socio-economic inequalities in obesity may be condescending, punitive and stigmatising, as well as ineffective.

In **Chapter Six**, I examine how views about obesity regulations reveal power relations which marginalise those most often targeted by the interventions. Broad public support for the implementation of preventive obesity regulations largely derives from neoliberal individual responsibility understandings of obesity and the

projected efficacy of regulations. The influence of these discourses on support for regulations is patterned according to gender, age, and socio-economic status. Theorising that this reflects gendered and classed responsibilities for food provision and concerns about material constraints, I argue for the importance of attending to the ways in which obesity regulations enact the values and beliefs of privileged groups.

To conclude, **Chapter Seven** draws together the themes and outcomes from each of the three studies through a lens of biopedagogy. Through its critical approach, this research interrogates how mainstream discourses position the role of governments in addressing obesity as educators about healthy lifestyles. As such, regulations which are understood to perform a pedagogical function achieve popular endorsement. I explain how these interventions may embed social inequities by enacting middle-class norms of food and health, and by deflecting responsibility for obesity back to the purported ignorance of individuals. While public health discourse positions regulations as emancipatory alternatives to behavioural interventions because of their socio-ecological focus, this thesis shows how regulations may be punitive, moralising, and may further marginalise target populations. Lastly, the chapter offers suggestions for public health practice and future research.

# **Chapter One**

# Identifying a role for preventive obesity regulations

This chapter details the public health context for this thesis in order to situate debates about the role of regulations in addressing the obesity epidemic. In tracing arguments for the implementation of regulatory interventions, I describe the ways in which the current impetus for regulations relates to broader historically-situated public health mechanisms that instruct proper citizenship and bodily stewardship, particularly among people experiencing socio-economic disadvantage. In doing so, I reveal the importance of investigating the contingent knowledges and relations of power which make possible regulatory obesity interventions. I therefore argue for a need to investigate public opinion as it relates to obesity policy development processes, in order to theorise how these systems of knowledge and power are (re)produced.

#### The public health crisis

The notion that there is an obesity epidemic has gained substantial traction in the health and medical community, the media, and public consciousness since the last decade of the twentieth century. Policy reports and a large body of academic research identify obesity as a serious and escalating crisis, with the increasing prevalence of obesity, associated disease and mortality burdens, resultant health and social inequities, and the economic impact commonly identified as indicators

of a public health crisis necessitating intervention (Gard & Wright, 2005; Monaghan *et al*, 2017).

Obesity is commonly described in the mainstream public health and biomedical literature as a major risk factor for an encompassing range of conditions, including type 2 diabetes, cardiovascular diseases, respiratory conditions, and certain cancers (Gard & Wright, 2005). In Australia, current estimates place the prevalence of obesity among adults at 27.9%, up from 18.7% in 1995 (ABS, 2013a, 2015). This is high by global standards, and is increasing at a faster rate than most other OECD countries (OECD, 2014). Among children, the prevalence of obesity has increased from about 5% in 1995 to 7.4% in 2014-15, although this masks an apparent stabilisation since the late-1990s (Nichols *et al.*, 2011; Olds *et al.*, 2009).

The health impacts of obesity are commonly presented as an economic problem, with economic modelling and cost projections of various 'direct' (e.g. medical services and public health interventions) and 'indirect' (e.g. lost productivity, foregone taxation revenue, and increased welfare payments) costs used to quantify the magnitude of the obesity epidemic (Access Economics, 2008; PwC, 2015). Estimates of the costs of obesity to the Australian economy vary widely, from \$8.3 billion (Colagiuri *et al.*, 2010) to \$58.2 billion (Access Economics, 2008). As I describe throughout the thesis, the use of economic rationalities to define the scope of the obesity epidemic serves to frame the problem one of collective and future concern.

#### Obesity as a health equity problem

Obesity is widely described not only as a health problem, but also as a health equity problem. In Australia there is an inverse relationship between socio-

economic status and obesity, with the most disadvantaged groups being at the highest risk of obesity. This pattern is evident globally, in all but the very poorest nations (Friel *et al.*, 2007). According to the most recent Australian National Health Survey, 33.8% of those living in the most disadvantaged areas of Australia are obese, compared with 21.6% in the least disadvantaged areas (ABS, 2016). The relationship between socio-economic status and obesity prevalence is graded such that the difference is not only apparent between the most advantaged and disadvantaged groups, but is progressive along the social gradient, as shown in Figure 3 below.

Per cent 40 33.8 35 30.3 29.3 30 25.4 25 21.6 20 15 10 5 0 1st quintile 2nd quintile 3rd quintile 4th quintile 5th quintile (Most (Least disadvantaged) disadvantaged)

Figure 3: Prevalence of obesity among Australians aged 18 years and over by socio-economic quintile, 2014-15

Note: Quintiles of Socio-economic Index for Areas Index of Relative Socio-economic Disadvantage, 2011 Source: ABS (2016)

The relationship between socio-economic status and obesity is complex: some evidence points to obesity as constraining social mobility, while other evidence suggests that social position is a cause of obesity. Longitudinal studies have found that early life disadvantage is related to obesity in adulthood (Parsons *et al.*, 1999), and that obesity is most likely to originate among those with already low social position, rather than being a cause of downward social mobility (Ball & Crawford,

2005). Among those who are upwardly mobile throughout the lifespan, evidence for an amelioration of the impact of childhood disadvantage on weight is inconsistent (Aitsi-Selmi *et al.*, 2013; Heraclides & Brunner, 2010).

However, obesity has been found to reduce opportunities for upward social mobility. Being obese is associated with fewer years of schooling, as well as lower levels of advanced education, higher likelihood of poverty, lower earnings, lower rates of employment, increased social isolation, and lower likelihood of having a partner or being married (Baum & Ford, 2004; Clarke *et al.*, 2010; Gortmaker *et al.*, 1993; Han *et al.*, 2009; Strauss & Pollack, 2003; Viner & Cole, 2005). These social consequences of obesity are stronger for women than for men (Brunello & d'Hombres, 2007; Caliendo & Lee, 2013; Cawley, 2000, 2004; Gortmaker *et al.*, 1993); reflecting the social milieu in which women face intense scrutiny around their weight (Warin *et al.*, 2008).

The relationship between socio-economic status and obesity is further complicated by the interaction between socio-economic position and other forms of social identity. As Sobal and Stunkard (1989) showed in their pioneering paper on the association between socio-economic status and obesity, while there is a consistently strong inverse relationship between socio-economic status and obesity for women in industrialised countries, the association is milder, non-existent, or reversed for men and children. The finding has been demonstrated many times in other global studies and in Australia (Cameron *et al.*, 2003; Cohen *et al.*, 2013; Devaux & Sassi, 2013; Feng & Wilson, 2015; Friel & Broom, 2007; King *et al.*, 2006; McLaren, 2007; Molarius *et al.*, 2000). The most recent Australian population estimates show that the prevalence of combined overweight and obesity is higher for women living in areas of highest disadvantage (61.1%) than

women living in areas of least disadvantage (47.8%), while for men the prevalence of overweight and obesity was not found to be impacted by socio-economic status (ABS, 2015). However, overall men were more likely to be overweight or obese than women (70.8% compared with 56.3%).

These gendered associations are also patterned according to other axes of social marginalisation. In the UK, US and Canada, women in racial and ethnic minority groups are especially likely to be obese compared with white women of comparable social position, while for men the association is less consistent (Flegal *et al.*, 2002; Kumanyika, 1999; Tremblay *et al.*, 2005; Wardle *et al.*, 2002). In Australia, 45.7% of Aboriginal and Torres Strait Islander women were obese in 2012-13, compared with 26.9% of non-Indigenous Australian women. For men, the difference was 39.1% to 27.4% (ABS, 2014a).

The socio-economic status gradient in obesity prevalence is often explained as being a factor of limited financial resources or greater stress associated with occupational or financial precarity, which promote unhealthy diets (Drewnowski & Specter, 2004; Moore, 2012). As described later in this chapter, this reasoning often underpins public health advocacy for regulations to address the inequitable social patterning of obesity. However, Cheon and Hong (2017) found that the mere subjective experience of being of lower social position relative to others influences preferences for unhealthy processed foods and increases caloric intake, suggesting that higher rates of obesity among the most disadvantaged groups is not fully explained by material constraints.

#### The neoliberal epidemic

Critical obesity research has problematised public health concern with obesity as outlined above as overstated or misdirected; arising through contingent scientific or ideological perspectives. This critical research has provided important insights into the relations of power which configure obesity as a site for government intervention. Accordingly, an extensive literature has examined obesity as a 'neoliberal epidemic' (Schrecker & Bambra, 2015), such that Bell and Green (2016) have warned of 'the perils of invoking neoliberalism in public health critique'. Eclectic and often reductive usage of the term has resulted in conceptual slippage, meaning that it is important to clarify my usage of the term in this thesis.

Broadly, neoliberalism refers to the dominant macro-economic doctrine of the West since the 1980s and the rationalities of government arising from it. Harvey (2005, 2) explains that:

Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterised by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices.

With neoliberalism operating on the premise that that free markets enable the possibility for individuals to achieve wellbeing, free market principles have extended to all aspects of social life. A consequence has been the emergence of self-governing, autonomous, and rational logics as the dominant means to understand individuals' actions regarding their health. Underlying this are two distinct, yet entwined, conceptualisations of neoliberalism: neoliberalism as a political economy premised on economic rationalism; and neoliberalism as a hegemonic ideology, inciting a discourse of individualism and self-regulation

among the responsible citizenry (Bell & Green, 2016). This latter conceptualisation derives from a Foucauldian concern with governmentality, which I expound in Chapter Two. Here, I describe how neoliberal ideology and Australia's neoliberal political economy impact on societal attitudes about obesity and the feasibility of regulatory reform for obesity prevention.

#### Neoliberal ideology and individual responsibility

The framing of obesity as a factor of (de-contextualised) individual choice and responsibility resonates with the neoliberal worldview that has dominated Australian politics and social thought in recent decades. These accounts use personal choice and 'lifestyle' to account for obesity, with explanations focussed on imprudent dietary choices, sedentary leisure time, and a lack of awareness of the causes of obesity and associated risks (Henderson *et al.*, 2009; Lupton, 2013a; Olsen *et al.*, 2009; Townend, 2009).

Through its emphasis on entrepreneurialism, consumerist culture, and governance through freedom, neoliberal ideology shifts responsibility for the problem of obesity onto the individual, who is tasked with making 'healthy lifestyle choices'. Underpinning this focus on consumer choice is an implicit understanding that, if enough consumers value a healthy lifestyle, the market for healthy foods will outweigh that for unhealthy foods and companies will rise to the increased demand. The persistence of obesity in this environment thus implicates a failure on the part of individuals (Walls *et al.*, 2009). As Guthman and DuPuis (2006, 444) explain:

Neoliberal governmentality produces contradictory impulses such that the neoliberal subject is emotionally compelled to participate in society as both out-of-control consumer and self-controlled subject. The perfect subject-citizen is able to achieve both eating and thinness, even if having it both ways entails eating non-foods of questionable health impact or throwing up the food one does eat. Those who can achieve thinness amidst this plenty are imbued with the rationality and self-discipline that those who are fat must logically lack; they then become the deserving in a political economy all too geared toward legitimizing such distinctions.

The discourse that obesity is a product of individual choice and that the responsibility for dealing with the consequences of these choices lies with individuals is pervasive: it has been identified in the media (Boero, 2007, 2013; De Brún *et al.*, 2013; Henderson *et al.*, 2009), Australian government policy documents (Baum, 2011; Baum & Fisher, 2011, 2014), submissions to government inquiries (Olsen *et al.*, 2009), obesity prevention campaigns (Lupton, 2014), nutritional discourse (Sanabria, 2016; Yates-Doerr, 2012), and public views (Barry *et al.*, 2009; Chambers & Traill, 2011; De Brún *et al.*, 2014; Hardus *et al.*, 2003; Hilbert *et al.*, 2007; Lundell *et al.*, 2013; Oliver & Lee, 2005, as discussed later in this chapter).

#### Embodying morality and health

Corporeality and food have long been sites of opprobrium due to their association with sloth and gluttony. However, moral scrutiny and cultural anxieties around obesity have intensified in the contemporary neoliberal era, in which the pursuit of health is a moral end in itself (Coveney, 2006). A new era of 'fat panic' (LeBesco, 2010) has emerged in recent decades, revealing the moral and cultural ideologies that have engendered burgeoning anxieties about obesity (Boero, 2007, 2013).

With the dominant discourse framing obesity as the result of individuals' failure to achieve a mechanistic balance between 'energy in-energy out' (Boero, 2007; Gard & Wright, 2005; Lupton, 2013a; Saguy & Almeling, 2008), obese bodies are read as immoral: symptomatic of 'reckless excess, prodigality, indulgence, lack of restraint,

violation of order and space, transgression of boundary' (Braziel & LeBesco, 2001, 3), and a cost to society (Halse, 2009). Anxieties about obesity are premised on reading obese bodies as a 'future truth' (Rich, 2011), with news reports propelling the notion that obesity (and by association overweight) is a 'time bomb' (Evans, 2010) or 'fat bomb' (Holland *et al.*, 2011). The potency of obesity as a signifier of disease is such that it has become naturalised in popular, academic, and public health discourses as *the* cause of disease, such that 'death is written on the body' (Prior 2000, 195; see also McNaughton 2013). Such alarmist claims about obesity are prevalent across policy reports, academic literature, and in the media (Boero, 2007, 2013; Gard & Wright, 2005; Henderson *et al.*, 2009; Lupton, 2004; Saguy & Almeling, 2008; Saguy & Gruys, 2010); belying uncertainties about the correlations drawn between obesity and mortality/morbidity (Campos *et al.*, 2006; Gard & Wright, 2005; Monaghan, 2005).

Anxieties about the obesity epidemic exist within a broader cultural context in which slimness is idealised for aesthetic reasons, for its association with health, and as a symbol of virtue and self-discipline over one's body. In contrast, obesity is reviled as an immoral embodiment of greed and a lack of self-control (Coveney, 2006). Obesity challenges notions of propriety, such that society 'read[s] the fat body as a site of moral and physical decay' (Murray, 2005, 266). As such, obesity epidemic discourse is replete with emotions such as disgust, loathing and anger. These visceral reactions arise through the abjection of obesity (Kristeva, 1982; Tyler, 2013), wherein obese bodies are read as unruly and uncontained, and, through their transgression of boundaries, inspire fear of contamination and feelings of revulsion (Fraser *et al.*, 2010; Lupton, 2013a, 2015). People classified as obese have endured intense discrimination in this context, and have described the

powerful feelings of shame and self-hatred that can arise from being characterised as disgusting (Braziel & LeBesco, 2001; Murray, 2005, 2009).

The ways in which health has come to signify moral fortitude has been explained through Crawford's (1980) concept of healthism. This describes the socially and culturally constructed ways of seeing health as a matter of morality through the logics of self-care. Crawford (1980, 378) explains that healthism adopts a 'strident moralism' which accentuates blame through the creation of a *potentially sick* role; asserting an obligation to stay healthy. With healthy lifestyles established as a source of moral virtue, the active achievement of health has come to denote value and social status. Obese people are thus regarded as architects of their own ill health through laziness, ignorance, and gluttony. The moral ideals resultant from healthist anxieties about the obesity crisis converge differently on those of different social strata, with the higher prevalence of obesity in more disadvantaged populations giving rise to moralising that people experiencing disadvantage are less restrained in relation to eating and lifestyle (Rich *et al.*, 2015; Saguy & Almeling, 2008).

#### The childhood obesity crisis

Intense concern around childhood obesity epitomises cultural anxieties about obesity. While childhood obesity prevalence appears to have stabilised in Australia since the mid- to late-1990s (ABS, 2013a; Olds *et al.*, 2009), many political, academic, media and popular accounts presume a continuing trend, such that 'fatness has become the primary childhood health problem in developed nations' (Ebbeling *et al.*, 2002). The oft-quoted claim that increasing childhood obesity prevalence means that the current generation of children will be the first to have

shorter average lifespans than their parents is indicative of the intense concern around childhood obesity in public discourse.

While neglecting ones' duty to one's self through the visible display of body fat is one matter, neglecting children is something of another magnitude. As Coveney (2006, 154) notes, fatness in childhood is not only about the 'parlous state' of children's health, or the 'ticking time bomb' of later disease. It is also a reminder that parents (and society more broadly) have not protected children from nefarious forces that seek to strip them of their innocence and replace it with consumerist greed. Children are a priority target for preventive obesity interventions, as in the context of intense concern about the future impacts of obesity, children represent both the problem and the solution: a source of anxiety and hope, as both the future generation of obese adults, and sites of prevention (Evans, 2010; Zivkovic *et al.*, 2010).

Concern with childhood obesity has been instrumental in positioning women as agents of the obesity epidemic. With childhood obesity typically framed as resulting from parental, and specifically maternal, ignorance, irresponsibility, and neglect (Maher *et al.*, 2010a; Maher *et al.*, 2010b; Warin *et al.*, 2012; Zivkovic *et al.*, 2010), women's bodies and behaviours have become critical sites for addressing obesity. This gendered responsibility for averting obesity is evident through widespread condemnation directed at women's inadequate preparation of their bodies for pregnancy, failure to establish healthy eating preferences in their children, and inability to fulfil the dual roles of breadwinner and homemaker (Warin *et al.*, 2008; Warin *et al.*, 2012; Zivkovic *et al.*, 2010).

### The war on obesity

The factors outlined above have intensified calls over recent years for government action to address obesity, as well as debate about the most effective and appropriate obesity prevention strategies.

#### Behavioural health promotion

To date in Australia, behavioural health promotion interventions have been the predominant obesity prevention strategy used by governments (Baum & Fisher, 2014; Grunseit et al., 2016; Nichols et al., 2013). The behavioural approach is premised upon psychosocial theories of behaviour change such as social cognitive theory (Bandura, 2004), the health belief model (Becker, 1974), and the theory of planned behaviour (Ajzen, 1985). These focus upon knowledge, attitudes, and selfefficacy as the primary determinants of health behaviours, and are thereby underpinned by an assumption that educating individuals about the risks and benefits of behaviour change will motivate behaviour modification. Behavioural health promotion falls into two broad categories: universal interventions targeted at large populations, such as social marketing; and targeted interventions implemented in a local area or in an identified at-risk group. Examples of targeted behavioural health promotion include behaviour modification programs in clinical settings, school and community-based education programs, and family-based behavioural management and parental skills education in the case of childhood obesity.

Behavioural health promotion approaches to obesity prevention have been subject to extensive critique on empirical and ideological grounds. These interventions draw on an implicit assumption that that individuals are the locus for behaviour

change, belying the complex socio-ecological contexts of obesity. As Aphramor (2005, 315) argues, these '[fail] to integrate people's lived experience as gendered, situated bodies in an inequitable world'. Behavioural health promotion adheres to the logic of neoliberalism, wherein people are positioned as being both capable of, and responsible for, managing and promoting their own health. Indeed, behavioural health promotion has been labelled emblematic of the practices of public health, and governance more broadly, in the neoliberal era (Baum & Fisher, 2014; Crawshaw, 2012).

Empirical evaluations have produced a dearth of evidence for a substantial or lasting impact of social marketing on obesity prevalence (Baum, 2008; King *et al.*, 2013; Myers, 2012; Walls *et al.*, 2011). Evaluations of targeted behavioural health promotion interventions have found some evidence for effect on diet and physical activity behaviours in the short-term among children (Bleich *et al.*, 2013; Brand *et al.*, 2014; Campbell *et al.*, 2001; Flynn *et al.*, 2006; Hesketh & Campbell, 2010; Kamath *et al.*, 2008; Waters *et al.*, 2011). However, studies of programs targeted at adults have produced inconclusive results (Brand *et al.*, 2014; Hardeman *et al.*, 2000; Kremers *et al.*, 2010) and the long-term impact of these programs on health behaviours and BMI is not established. While there is some evidence from controlled trials that behaviour modification programs in clinical settings can impact diet and physical activity behaviours and reduce BMI in the short-term (Brown *et al.*, 2009; Foster *et al.*, 2005; Galani & Schneider, 2007), long-term effectiveness has again not been demonstrated. Importantly, such interventions could not be feasibly or cost-effectively implemented on a population-wide basis.

Behavioural health promotion interventions have been criticised for their capacity to exacerbate inequalities in obesity. These interventions have been shown to be least effective in changing behaviours among those populations at highest risk of adverse health outcomes associated with obesity (Montague et al., 2001; Niederdeppe et al., 2008), and therefore operate to widen existing socio-economic inequalities in health status. Two recent systematic reviews have shown that information-based obesity interventions generally increase existing health inequalities (Beauchamp et al. 2014; McGill et al. 2015; see also Baum 2007; Baum & Fisher 2014; White, Adams & Heywood 2009). Illustrating this, King and colleagues (2013) found in their evaluation of the Australian Government's Measure Up social marketing campaign that awareness of the campaign was highest among more educated and affluent groups. A report summarising audience responses to the Measure Up campaign observed that 'people from socially disadvantaged groups, including NESB [non-English speaking background] and Aboriginal and Torres Strait Islander communities' were most likely to be in the segments of the audience that had a low appreciation of why lifestyle change is needed, or how these changes could be made (cited in Mayes 2015, 45). Owing to the recognised complexity of changing behaviours among these groups, the campaign focussed only on those segments of the population with the social and economic resources to make the proposed lifestyle changes (Lupton, 2014; Mayes, 2015).

Behavioural health promotion has also been criticised for increasing the stigma associated with obesity, as these interventions highlight the undesirability of obesity and telescope attention to individual action as the means through which weight is gained and lost (Lupton, 2015; MacLean *et al.*, 2009; Puhl & Heuer, 2010; Walls *et al.*, 2011). Lupton (2014b) describes how the Australian *LiveLighter*<sup>2</sup> (Figure

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<sup>&</sup>lt;sup>2</sup> LiveLighter was developed by the Western Australian Government in 2012, and has been subsequently rolled out in the Australian Capital Territory, Victoria, and the Northern Territory. The campaign appears in a range of media outlets, bus shelters, and its own dedicated website (www.livelighter.com.au). Evaluation surveys claim to have 'not found any increase in negative stereotypes held about people carrying excess weight' (LiveLighter, 2017).

4) social marketing campaign evokes disgust as a motivating force to incite behaviour change. The developers of this campaign note that it 'uses innovative, hard-hitting strategies to jolt people out of their complacency about being overweight or obese' (campaign pamphlet, cited in Lupton, 2015). The underlying logic is that audiences are apathetic or resistant to public health messages about the health risks of obesity, and that a strong visceral response derived portraying fat grotesque will provoke behaviour change. As such, the campaign perpetuates the notion that obesity is disgusting.

GRABBABLE GUT
OUTSIDE
MEANS TOXIC FAT
INSIDE

Figure 4: LiveLighter social marketing campaign

Source: LiveLighter (2017)

Adopting a different approach, the *Swap it*, *Don't Stop it* campaign<sup>3</sup> (Figure 5) uses happy animated balloon characters to encourage audiences to change their lifestyles in order to lose weight and reduce their risk of chronic disease. By employing a jolly and encouraging tone, the campaign seeks to assure audiences that making these changes (swapping big for small, swapping often for sometimes, swapping sitting for moving, or swapping watching for playing) is easy. This fails to acknowledge that these small changes are in fact major shifts in everyday habits that themselves are the product of a complex interaction of social, cultural, and

<sup>&</sup>lt;sup>3</sup> This was a national campaign with advertisements that appeared on television, radio, print media, cinemas, shopping centres, car parks, transit locations, billboards, social networking sites, as well as having its own dedicated website (Myers, 2012)

environmental factors (Lupton, 2014). The campaign therefore plays into the discourse that obese people are ignorant of the causes of obesity.

Once you start, it's easy:

Swap Pa Feed For a Lead

Swap for small.

Swap often for someimes.

Swap string for moving.

Swap string for moving.

Swap watching for playing.

Swap watching for playing.

Without losing out on the things you love.

Australian Government

Australian Government

Australian Government

Australian Government

Swap a Feed For A Lead

Swap a Feed For Rail

A waist measurement of greater than 94cm for men and 85cm for women puts you at increased risk of type 2 disabetes, some cancers and heart disases.

But become a swapper and you can lose your belly, without losing out on the things you love.

Figure 5: Swap It, Don't Stop It social marketing campaign

Source: Department of Health (2014b)

Scholars describing the stigmatising effects of behavioural health promotion interventions have expressed concerns about the potential for these harmful effects to disproportionately impact on vulnerable population groups. The failure of behavioural health promotion interventions to reduce inequalities in obesity may be attributed to the 'deaf ears phenomenon' (Warin *et al.*, 2008) that typecasts those of lower socio-economic position as recalcitrant and in need of

more targeted education to inform them about the risks of choosing not to comply with health education messages. These interventions normalise particular ways of living and demonise others, and in doing so, perpetuate individual responsibility discourses that blame particular social groups for their failure to live up to social standards of health (Wright, 2009). Psychological research has shown that fear-arousing social marketing campaigns induce feelings of anxiety, anger, and defensiveness among disempowered and disadvantaged groups at highest risk of adverse health outcomes (Hastings *et al.*, 2004). As well, behavioural health promotion may also encourage avoidance responses that further increase risk of ill-health and social marginalisation (Broom, 2008).

#### Regulations

#### The obesogenic environment

The failure of behavioural health promotion interventions to bring about substantive reductions in the prevalence of obesity and concern with their stigmatising effects, together with an extensive body of evidence describing the relationship between socio-ecological factors and the aetiology of obesity (e.g. Drewnowski, 2009; Pickett *et al.*, 2005), has led socio-ecological approaches to obesity prevention to dominate current mainstream public health research and practice. From this perspective, the obesity epidemic of recent decades is explained as a natural response to physical, socio-cultural, economic, and political 'obesogenic environments' (Egger & Swinburn, 1997) that promote positive energy balance among populations (Swinburn *et al.*, 1999).

The emergence of obesogenic environments is widely attributed to the rise of neoliberal free-market economies since the 1980s, which endeavour to promote

economic growth through liberalised, deregulated global markets (Swinburn et al., 2011; Ulijaszek, 2007). This has purportedly resulted in a 'nutrition transition' (Drewnowski & Popkin, 1997), wherein food systems have increasingly encouraged consumption of energy-dense foods through the production, distribution, ready availability, affordability, and pervasive marketing of these products. This has occurred along with concomitant declines in physical activity through laboursaving technologies at home and in the workplace, sedentary leisure activities, and reliance on cars for transport. Together, these factors are explained to have led to an imbalance between energy intake and expenditure at the population level (Bleich et al., 2008; Swinburn et al., 2011). These political-economic explanations for the emergence of obesogenic environments are supported by research demonstrating that national political structures are associated with obesity prevalence (Ulijaszek, 2007). Notably, analysis of cross-national correlates of obesity conducted by Offer et al. (2010) showed that countries with a high degree of market liberalism have a higher prevalence of obesity and easier access to fast food (measured by lower relative Big Mac price) than countries with different political-economic regimes.

A range of different frameworks exist to explain the many and diverse socioecological determinants within these obesogenic environments, with obesity
described as a 'complex' or 'wicked' problem (Egger & Swinburn, 1997; Foresight,
2007; Ulijaszek, 2015). Socio-ecological models describe individuals' lifestyles as
embedded within a 'causal web' of proximal factors and distal macro-social
contexts (Kumanyika, 2001; Story *et al.*, 2008). For instance, the *Foresight Commission* in the UK produced a 'complex systems map' of 108 different
determinants of obesity (Figure 6), aiming to illustrate 'the sum of all the relevant

factors and their interdependencies that determine the condition of obesity for an individual or a group of people' (*Foresight*, 2007, 1). This frames the causes of obesity as situated within complex biological systems, themselves embedded within complex societal frameworks (Ulijaszek, 2015). The *Foresight* report marked a turning point where obesogenic environments came to be understood in terms of 'systems complexity', with this approach to obesity research and policy making having subsequently been taken up by public health researchers in Australia and elsewhere globally (Allender *et al.*, 2015; Ulijaszek, 2015).

#### Potential regulatory interventions

Socio-ecological frameworks have been used to systematically conceptualise points of intervention to address obesity. An extensive literature advocates for the use of regulatory measures for obesity prevention, with a range of different approaches available to governments (e.g. Gostin, 2007; Hawkes *et al.*, 2015; Magnusson, 2008a; Sacks *et al.*, 2008; Swinburn *et al.*, 2011). Figure 7 below, while not exhaustive of all regulatory options to address obesity, illustrates how the links between socio-ecological influences on population obesity and regulatory interventions have been conceptualised in public health scholarship.

Public health advocates argue that obesity prevalence and related health inequalities will not decrease without regulations such as these which address contemporary obesogenic environments and corporate interests (Magnusson, 2008a; Swinburn, 2008; Swinburn *et al.*, 1999). This is because, by engaging with

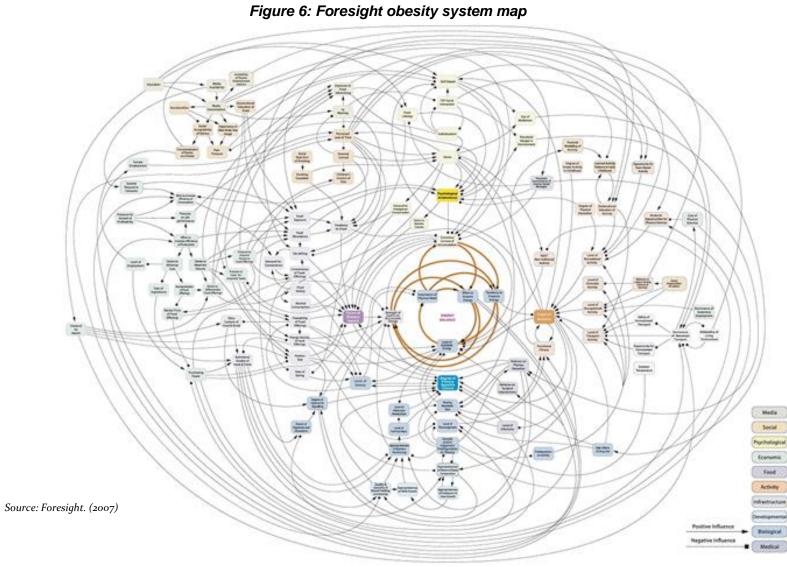


Figure 7: Socio-ecological sectors influencing population obesity, and related possible regulatory interventions

Sector	Regulatory strategies
Primary production	- Primary production taxes and subsidies
Food production	- Product composition standards
Food distribution	- Importation restrictions, subsidies, and taxes
	- Quarantine restrictions
	- Trade arrangements
Marketing	- Marketing restrictions (e.g. to children, or in specific locations
	such as in schools or at sporting events)
	- Consumer protection (e.g. misleading advertising)
Retail	- Incentive systems for welfare recipients to buy healthy foods
	- Food taxes/subsidies
	- Requirements for food outlets to offer healthy menu items
Catering/food service	- Food procurement policies
	- Portion size restrictions
Information/disclosure	- Nutrient disclosures/health warnings
	- In marketing materials
	- On food/beverage products
	- On menus
	- Restrictions on health claims made on food products
Income tax	- Tax deductions (e.g. gym memberships, swimming pool
	passes)
Infrastructure and	- Land-use management:
planning	<ul> <li>Primary production zoning (e.g. agriculture/fisheries)</li> </ul>
	<ul> <li>Location/density of fresh food retailers/fast food retailers</li> </ul>
	- Urban planning
Schools	- School food policies
	- Nutrition/physical activity curriculum requirements
	- Facilities for physical activity in schools
	- BMI monitoring in schools
Workplaces	- Workplace food policies
<del></del>	- Building design standards
Transport	- Public transport availability
	- Taxation incentives for using public transport
	- Taxation policies on cars
	- Parking restrictions
	- Traffic controls
Cnort and recreation	- Trade arrangements on motor vehicles
Sport and recreation	- Safety of local recreational environments
	<ul><li>Facilities for physical activity (open spaces/built structures)</li><li>Public liability insurance requirements</li></ul>
Hoalth systems	Notifiable disease model for chronic disease/biophysiological
Health systems	markers for chronic disease
	markers for chronic disease

Source: Gostin (2007); Hawkes et al. (2015); Magnusson (2008b); Sacks et al. (2008); Swinburn et al. (2011)

the social, cultural, economic, and physical environments that are under-acknowledged by behavioural health promotion interventions, these measures are argued to have the capacity to influence the behaviour and health status of broad populations (Baum & Fisher, 2014; Friel *et al.*, 2007; Magnusson, 2008a,b;

Swinburn, 2008). The underlying logic of regulatory approaches advocated by public health proponents – such as those summarised in Figure 7 – draw on libertarian paternalism or 'nudge' (Thaler & Sunstein, 2008) rationales, in which behaviour change occurs without the intent or knowledge of individuals. In locating responsibility for obesity with the 'causes of causes' rather than with individuals, the obesogenic environment thesis is thereby argued to shift the 'focus from the putative moral failings of fat people to the structural or environmental causes of obesity' (Guthman, 2012, 952; see also Colls & Evans 2014).

There is some evidence from other jurisdictions globally to suggest that a range of regulatory interventions are effective in reducing energy intake and consumption of unhealthy foods, although there is currently no evidence to suggest that these have resulted in reductions in obesity (Mayne *et al.*, 2015; Sassi, 2010; Sisnowski *et al.*, 2017). In particular, attention has been directed towards the effectiveness of fiscal interventions, with a recent systematic review identifying an impact of food taxes and subsidies on the healthfulness of food purchases, but no impact on BMI (Afshin *et al.*, 2017).

Generating evidence of the effectiveness of regulations is methodologically challenging as evaluations are observational, the impact of regulations cannot be isolated, and regulations might only become effective in conjunction with other interventions (Mayne *et al.*, 2015; Swinburn *et al.*, 2005; Victora *et al.*, 2004). A number of studies have thereby sought to model the impact of these measures on diets, BMI, and associated morbidity (Carter *et al.*, 2009; Nnoaham *et al.*, 2009; Sacks *et al.*, 2011b; Sassi *et al.*, 2009). However, these models tend to employ logic pathways about the mechanisms through which regulations may change behaviour that belie the socio-ecological premise of the interventions. For instance, Sacks

and colleagues (2011b) modelled the impact of mandatory traffic light nutrition labelling on obesity in Australia, assuming an average 10% decrease in energy consumed by 10% of the population. This assumption did not account for how socio-ecological contexts may differentially influence behaviour change across population sub-groups.

#### The equity effects of regulations

The emphasis on obesogenic environments is part of the broader social determinants of health agenda that has become dominant in mainstream public health research and practice in recent years (Commission on Social Determinants of Health, 2008). This approach recognises that socio-economic inequalities in health are influenced by the inequitable distribution of social, political, and economic resources. As such, the ability to choose to conform to healthy behaviours is not equally feasible for all. Many public health proponents thereby ascribe to the view that the opportunity to adopt healthy lifestyle is a matter of social justice (e.g. Adler & Stewart, 2009; Baum & Fisher, 2014), such that social justice has been described as one of public health's core values (Gostin & Powers 2006).

Regulations addressing obesogenic environments are considered an effective means of enabling the equitable distribution of health (Baum & Fisher, 2014; Friel et al., 2007; Olsen et al., 2009). Acknowledging that those in lower socio-economic groups may face structural barriers to healthier lifestyles – such as limited financial resources (Pickett et al., 2005; Ward et al., 2013) or neighbourhood environments that increase exposure to fast foods (King et al., 2006) – preventive obesity regulations seek to 'ensure an equitable distribution of ample and nutritious global

and national food supplies; built environments that lend themselves to easy access and uptake of healthier options by all; and living and working conditions that produce more equal material and psychosocial resources between and within social groups' (Friel *et al.*, 2007, 1242).

Despite the emphasis on the equity effects of regulations in public health advocacy discourse, there is currently little evidence that such interventions would improve health equity. Some evidence suggests that taxes on sugar-sweetened beverages may reduce purchasing of these products especially among those in disadvantaged socio-economic groups (Cochero *et al.*, 2017), although the extent to which reduced consumption will result in health gains for these groups is unclear (Nnoaham *et al.*, 2009). However, most evaluations of obesity prevention regulations have not assessed their impact on socio-economic inequalities (Beauchamp *et al.*, 2014).

Some critical scholars have drawn attention to the ways in which obesogenic environment models problematise all factors external to individuals, and thereby render the minutiae of (disadvantaged) peoples' lives as sites for intervention (Colls & Evans, 2014). Obesogenic environment explanations for obesity have been criticised as 'apolitical ecologies', wherein the role of social power in producing obesity or defining it as a problem is unaccounted for (Robbins, 2004 cited in Guthman, 2011, 9). These explanations, and the solutions which are aligned to them, normalise certain lifestyles by drawing on the underlying assumption that people will choose health once 'health depriving' conditions have been mediated (Guthman, 2011; 2013). As such, obesogenic environment accounts have been criticised for contributing to moralising discourses that blame particular social

groups for their failure to live up to social standards of health (Colls & Evans, 2014; Guthman, 2013; Kirkland, 2011; Wright, 2009).

The current emphasis on the use of regulations to attenuate socio-economic inequalities in obesity has resonances with early public health practice. The social determinants paradigm underpinning current public health practice has been described as a re-politicisation of the discipline following the biomedical reductionism of the twentieth century (Szreter, 2003). Nineteenth century social reformers concerned with the impact of industrialisation and urbanisation on the health of the working classes – such as Virchow in Germany, Chadwick in the United Kingdom, and Villerme in France - sought to marshal environmental and political reform to contain infectious disease epidemics (Baum & Fisher, 2014). However, interventions were nonetheless exercised disproportionately on the poor, whose intemperate lifestyles remained the focus for reform; designed in part to protect the economic interests of the higher classes (Hamlin, 2015). For instance, British reformer Sir Edwin Chadwick acknowledged the need to address the 'adverse circumstances' of the working classes through his reforms of the Poor Laws. Yet, he saw that it was ultimately their deficient education and improper behaviours that accounted for their low health status:

The population so exposed is less susceptible to moral influences and the effects of education are more transient than with a healthy population; these adverse circumstances tend to produce an adult population short-lived, improvident, reckless and intemperate, and with habitual avidity for sensual gratifications (Chadwick, 1930 cited in Labonté *et al.*, 2015, 97).

Recognising the historical inclination for public health interventions addressing the ill-health of the poor to revert to moral guidance, Petersen and Lupton (1996) have argued that there has been surprisingly little analysis of power relations as they pertain between experts and non-experts, or the rich and the poor, given the

centrality of the concept of 'equity' in contemporary mainstream public health discourse.

In this thesis, I draw into scrutiny the power relations and systems of knowledge that enable regulations to be proposed (and potentially implemented) in the name of the health of disadvantaged groups and for the good of the Australian population. Without directing critical attention to the discourses, ideologies and institutions enabling these public health efforts, the contingent power relations enabling the use of regulations remain intact, and the ability of these interventions to deliver on equity outcomes remains undertheorised. I therefore now turn to the politics of public health policy development as a foundation to theorise the pathways through which these power relations and systems of knowledge are (re)produced.

#### **Barriers to regulation**

Despite significant criticisms of the limitations and negative impacts of behavioural health promotion interventions, particularly in the context of research on the social determinants of health, behavioural approaches persist as the dominant approach to obesity prevention in Australia. Recommendations from obesity prevention strategies for regulatory approaches, as outlined in the introductory chapter, largely remain unaddressed. The recommendations from these strategies that have been implemented are those which have been predominantly operationalised in health care settings, or adopt an explicitly behavioural health promotion approach (Fisher *et al.*, 2016).

This tendency for policy strategies to envisage broad structural and regulatory reform to address distal determinants only to 'drift downstream to focus on

individual lifestyle factors' (Popay *et al.*, 2010, 148) is known as 'lifestyle drift' (Baum, 2011; Baum & Fisher, 2014; Popay *et al.*, 2010). Lifestyle drift is a by-product of neoliberal regimes of governance, wherein the strong ethos of individualism results in the inherent logic and appeal of behavioural health promotion (Baum & Fisher, 2014). The ways in which Australia's neoliberal market economy facilitates lifestyle drift in obesity policy reform is described below.

#### The 'financialization of everything'

Neoliberal political economies are premised on an economic rationalist view that the free market should be the mechanism through which all economic, political, and social decisions are made (Clarke, 2004). This 'financialization of everything' (Harvey, 2005, 42) has resulted in the broadening reach of the neoliberal political economy across social life, and has reduced policy debates to pragmatic economic discourses. Neoliberalism has resulted in a downsizing of government under the banner of 'efficiency' through privatisation, deregulation, and liberalisation; the commodification of individuals as consumers; and the valuing of social benefits via the discourse of profits and private interests (Harvey, 2005). This has a pervasive impact on social thought, to the point where pragmatic economic rationalities have become the dominant discourse of health policy.

The pervasiveness of economic rationalities across the structures and practices of government in Australia means that obesity is resistant to regulation. A hierarchy of policy power exists between government sectors, in which economic and deregulation agendas are seen to be of higher importance than the health agenda (Buse *et al.*, 2005). This arises from a belief within governments that their reputations rest on enabling industrial productivity, accompanied by sustained

employment and profits (Loff & Crammond, 2010). As the implementation of preventive obesity regulations may be to counter these economic objectives, matters of health policy are believed to be less compelling to the community (and the corporate sector), and therefore governments (Loff & Crammond, 2010). The preference for economic productivity is reflected through the prominent and recurring themes of red tape reduction, promotion of competition, expansion of employment opportunities, and creation of avenues to subsidise business across Australian government policy (Loff & Crammond, 2010).

Specific regulatory mechanisms exist in Australia to protect economic interests from the potential impost of obesity regulations. Food Standards Australia New Zealand (FSANZ), the statutory authority responsible for developing food standards for Australia and New Zealand, is empowered to develop standards for food regulatory measures, including control over food labelling, promotion, and advertising. However, under the *Food Standards Australia New Zealand Act 1991*, FSANZ's statutory mandates include the competing objectives of protecting public health and safety, and maximising the economic and global market competitiveness of the Australian food industry (Magnusson, 2008b). It is therefore unlikely that FSANZ could undertake significant regulatory reform under its existing powers.

The Regulation Impact Assessment (RIA) process also impedes the implementation of preventive obesity regulations. This is a key deregulation strategy which aims to 'ensure that regulations are efficient and effective in a changing and complex world' (OECD, 2017). In this context, efficiency and effectiveness are code for promoting economic growth through the elimination of coercive restrictions in free markets. As such, the RIA process explicitly focusses

upon engendering economic freedoms rather than health or other social outcomes. The process, administered at the federal level by the Office of Best Practice Regulation (OBPR) within the Department of Premier and Cabinet, requires government departments, agencies, statutory authorities, or boards proposing regulatory change to submit a Regulation Impact Statement (RIS) demonstrating that the benefits of the intervention proposed outweigh the costs to business (OBPR, 2016). Unless a proposed regulation is part of the policy platform on which the government was elected, evidence of beneficial social impact and minimal economic impact is required before proposals for new or reformed legislation can proceed. Senior federal government officials with responsibilities pertaining to food and nutrition policy agree that the evidence required to justify the benefit of any preventive obesity regulation over its cost to business would be almost impossible to obtain (Crammond *et al.*, 2013). Similar processes aiming to avoid disincentives to private investments and additional costs to business are required at the state/territory level (e.g. Government of South Australia, 2011).

#### The power of 'Big Food' in obesity policy development

The dominance of the 'Big Food' industry within neoliberal free-market political economies is another dominant reason why obesity regulations are currently politically untenable in Australia. While public health interventions promoting individual behaviour change do not directly challenge the practices of this sector, regulations seek to reduce the availability and consumption of processed foods, and are therefore likely to curtail profits.

Globally, the 'Big Food' industry is dominated by a small group of manufacturers and retailers that have substantial power in shaping the composition of food

systems and food policy priorities (Lang, 2003). 'Big Food' have emulated tactics deployed by the tobacco industry to stave off regulations, including: emphasising personal responsibility for health behaviours; funding 'junk' science to instil doubt about the harms associated with processed foods; deflecting attention to other causes of disease; making self-regulatory pledges; and lobbying governments (Brownell & Warner, 2009).

As Australia's largest manufacturing industry, the Australian food and beverage sector asserts substantial influence over government obesity prevention endeavours. Food industry opposition to the implementation of preventive obesity regulations has been acknowledged by Australian policy actors to pose a substantial barrier to the implementation of regulations (Baker *et al.*, 2017; Chung *et al.*, 2012; Shill *et al.*, 2012). Analyses of the political activities of the Australian food industry have identified a range of mechanisms through which food industry actors have sought to deflect regulatory reform. These include media engagement framing tactics to shape political and public views of the sector, by highlighting substantial economic contributions while framing obesity as a problem of personal responsibility, and describing only diets rather than specific foods as 'healthy' or 'unhealthy'. More direct means of policy influence have included donations to both major political parties, lobbying to influence the development of trade and investment agreements, and adopting voluntary self-regulation initiatives (Mialon *et al.*, 2016, see also Cullerton *et al.*, 2016).

Food industry actors have a long history of involvement in health policy development in Australia. The Australian Food and Grocery Council (AFGC), the processed food industry's peak lobby group, was a member of the reference committee for the development of the 1997 NHMRC *Acting on Australia's Weight* 

strategy (NHMRC, 1997). Since then, food industry representatives have been involved in the development of other major obesity policy strategies: the AFGC and McDonald's were members of the Consultative Forum for the *Healthy Weight 2008* strategy (Department of Health and Ageing, 2003), while the AFGC was a member of the National Preventative Health Taskforce and NHMRC Dietary Guidelines Committee (Swinburn & Wood, 2013). Food industry influence over Australian nutrition policy is the key reason for the development of the HSR system instead of the traffic light scheme preferred by public health proponents (Kumar *et al.*, 2017). The HSR Project Committee comprised representatives from the Australian Beverages Council, AFGC, Australian Industry Group, and the Australian National Retail Association (Food Regulation, 2016). Most recently, the Healthy Food Partnership, discussed in the introductory chapter, which was developed to guide a voluntary reformulation program, has included eight food industry bodies as members, along with three non-government health organisations, and FSANZ (Department of Health, 2015).

## The role of public opinion in regulatory reform

In this complex political environment, public health advocates concerned about inaction in obesity policy reform have turned their attention to public opinion. Various political science models have conceptualised the role of public opinion in policy processes (e.g. Baumgartner & Jones, 2010; Howlett *et al.*, 2003; Kingdon, 2003; Sabatier & Weible, 2007). These describe the ways in which public views can traverse the multifaceted and competing imperatives of policymaking – including economic considerations, opposing stakeholder views, and a lack of empirical evidence – to influence policy pathways. The mechanisms through which public

opinion influences policy are complex and vary across policy sectors, although correspondence between public opinion and policy is commonly observed (Chard, 2012).

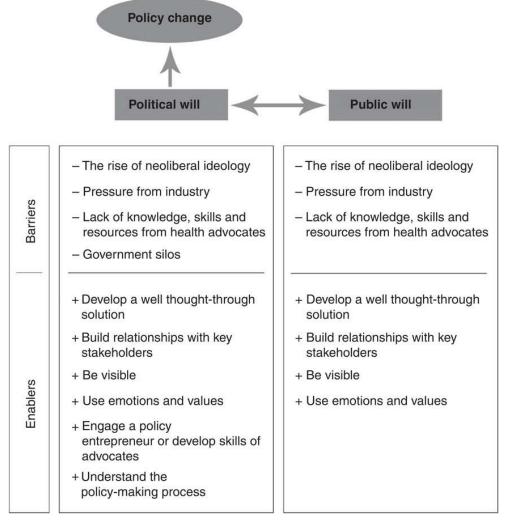
Public opinion is conceptualised in much of the public health scholarship as a part of the machinery of advocacy. Research in the discipline has identified that, while most public health proponents aspire to collaborate with governments to develop evidence-based policy in line with research findings (Carter, 2010), policy decisions are influenced by political environments. Under Australia's Westminster system of government, policy actors inside health departments are answerable to health ministers, who are in turn answerable to political cabinets, who are accountable to those who elect them. With political parties achieving power through votes in marginal electorates, politicians – and policies – are sensitive to public will (Chapman, 2004).

A systematic review of barriers to and enablers of nutrition policy reform conducted by Cullerton and colleagues (2016) found that public will is a major component of political will to pursue policy change. As Figure 8 shows, the mechanisms through which policy change occurs often involve addressing links between public will and political will. Appeals to emotions and values and increasing public recognition of health issues were identified as key strategies to mobilise public support in order to catalyse policy change. These approaches were considered particularly effective in overcoming barriers posed by neoliberal governments.

Public health advocates therefore seek to encourage public support for regulations and mobilise political demand for reform in order to encourage decision-makers to

endorse their policies (Chapman, 2004; Haynes *et al.*, 2011; Huang *et al.*, 2015). Leading Australian public health researchers who have successfully influenced policy reform have agreed that public opinion, ideology, and economic considerations are more influential in public health policy reform than research evidence (Haynes *et al.*, 2011).

Figure 8: Barriers to and enablers of nutrition policy change



Source: Cullerton et al. (2016)

Australian policymakers have acknowledged that evidence of public support would be an enabling factor for the implementation of preventive obesity regulations.

Chung and colleagues (2012) interviewed policymakers in state governments about

that governments would be unwilling to regulate against public will if it impacted their chances of being re-elected. Similarly, Crammond and colleagues (2013) found that senior federal policymakers were concerned with a lack of evidence of public support for obesity prevention regulations. These policymakers observed that the decision to regulate to address obesity is likely to be politically motivated, rather than strictly evidence based; pointing to a role for public pressure to catalyse regulatory reform. In particular, hurdles posed by industry lobbyists, economic interests, a shortage of evidence of efficacy, and the RIA process were identified by participants as amenable to being overridden by public will. This occurred in the case of Australian laws requiring plain packaging of tobacco, where there was a lack of evidence of the efficacy of the intervention and strong industry opposition (Crammond *et al.* 2013; see also Baker *et al.* 2017).4

The importance of public opinion for the implementation of obesity regulations has been observed through historical trends in the implementation of public health regulations. Public support has been instrumental in regulating many public health domains, including ostensibly private behaviours such as tobacco, illicit drug, or alcohol use (Economos *et al.*, 2001; Kersh & Morone, 2002a). In particular, public perception of a 'crisis' has been observed to be a catalyst for regulation. Physical catastrophes such as earthquakes and fires have catalysed building code reforms, while, as discussed earlier, widespread concern about the

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<sup>&</sup>lt;sup>4</sup> Australia was the first country to require plain packaging of tobacco products, with laws coming into effect on 1 December 2012. The tobacco industry launched a challenge to the laws in Australia's High Court, however the Court ruled against industry claims that the legislation infringed intellectual property rights (WHO 2013)

moral character of the working classes impelled sanitary reforms to control infectious disease outbreaks among the poor (Walls *et al.*, 2012).

The implementation of preventive obesity regulations in other jurisdictions globally has also established the role of a supportive public opinion climate. In the United States, policymakers from state legislatures have nominated public will as the top factor influencing health policy priorities, followed by evidence of scientific effectiveness (Dodson *et al.*, 2013). In New York City, where regulations including restrictions on trans-fats and mandatory chain restaurant menu labelling have been implemented, public support was observed by policymakers to be key to the passage of reform (Sisnowski *et al.*, 2016).

#### Australian public opinion about obesity prevention interventions

A modest body of recent Australian research has examined public support for government action addressing obesity. Although these studies have found that support is strongest for behavioural public health campaigns, broad support for a range of regulatory approaches has also been identified. Consistent with findings from other countries (explored below), support has been higher for regulations specifically targeting children or promoting enhanced provision of information to consumers (for example, mandatory food labelling), and lower for restrictive regulations (such as taxes).

A national survey conducted with main grocery buyers in Australian households found majority support for a range of preventive obesity regulations (Morley *et al.*, 2012). Support ranged from 56% for a total ban on the advertising of unhealthy foods, to 97% support for restricting marketing to children via email or SMS. Support for traffic light labelling on packaged foods was at 87%, while, 69%

supported taxation of soft drinks. Results showed that participants living in socio-economically disadvantaged areas were less likely to support the interventions than those from comparatively more advantaged areas. While the reasons for this finding were not explored in the study, this was inferred to be due to increased sensitivity to price. The researchers argued that low support among disadvantaged groups 'needs to be balanced against the evidence that points to unhealthy food and beverage taxes being the most cost-effective obesity prevention initiative' Morley *et al.*, 2012, 90).

Another study, conducted in Western Australia, also found strong public support for obesity regulations (Pollard *et al.*, 2013). The study examined pooled data from surveys conducted in 2009 and 2012, with a total of 2,147 participants aged 18 to 64. Findings showed that 97% of respondents believed government regulation of nutrition information food labels is important, 94% agreed a health rating on labels is important, 84% agreed that government regulation of food advertising is important, and 85% believed supply of environmentally-friendly food is important. Women were more likely than men to support restrictions on food advertising and supply of environmentally-friendly food, and those who identified as obese were less likely than those who identified as normal weight to endorse nutrition information on food labels and food advertising restrictions. The study found no statistically significant differences in views by age, education, income, geographical location, or socio-economic status.

Hardus and colleagues (2003) surveyed views about the causes of childhood obesity and support for a range of interventions among a convenience sample of 315 adults at a shopping centre in Melbourne, Australia. Findings illustrated the most commonly identified causes of childhood obesity were media promotion of

unhealthy food (52%), overconsumption of fast foods (50%), and too much TV (43%). While the study identified that behavioural health promotion measures were more acceptable overall, a majority of respondents agreed that regulatory measures – including banning of food advertising on children's television; a tax on high-fat foods; and tax incentives to support healthy food manufacturers – were important.

Pettigrew and colleagues (2012) surveyed Western Australian public views about fast food companies' sponsorship of community events, such as McDonalds' sponsorship of Little Athletics through marketing on uniforms and signage at venues. Results of the study showed that support for restrictions on fast food sponsorship of community events had high public support: almost half of the respondents believed that promotion of fast foods is inappropriate at community events, and two-thirds were concerned that promoting fast foods at community events sends contradictory messages to children.

In a qualitative study, Hesketh and colleagues (2005) examined views held by parents and children about barriers to healthy lifestyles and support for childhood obesity prevention interventions. Results showed that both children and parents were well informed about healthy eating, although this knowledge did not translate into consistently healthy diets. While a range of socio-ecological barriers to healthy lifestyles were identified, suggestions for interventions provided by the participants predominantly focussed on education and school-based programs. Contradictory messages about healthy diets (for example, a lack of clarity over whether meat is healthy – it has iron, or unhealthy – it has fat) were identified as a focus for these interventions.

A number of citizens' juries have recently been held in Australia to examine public views about the use of regulations to address obesity. Street and colleagues (2017) identified strongest support for health promotion in school settings, however mandatory front-of-pack labelling of food and drink, regulation of food marketing, and taxes were also endorsed by their jury. In another citizens' jury, Moretto and colleagues (2014) found strong support for taxing soft drinks, but less support for increased taxes on foods. A citizens' jury conducted by VicHealth (2015) identified support for a range of regulations including bans on 'junk food' advertising and taxes on sugar-sweetened beverages, along with support for school-based and community education programs.

# Attributions of responsibility: explaining public attitudes towards obesity policy

Research seeking to increase public support for obesity regulations commonly draws on psychological theories of attribution (e.g. Heider, 1958). These theories suggest that individuals explain social phenomena through their understandings of causality; attributed to internal factors within a person's control, or external factors over which people have no control. In the context of obesity policy, this body of research has contended that public support for regulations is lower than for behavioural health promotion interventions (such as social marketing) because dominant individual responsibility attributions for obesity are incongruous with the socio-ecological underpinnings of regulatory interventions.

Support for regulations tends to be conceptualised in the public opinion literature in terms of these binary models of obesity causation. Oliver and Lee (2005, 929) explain:

If obesity is seen as environmental in origin, then there should be greater support for policies that restrict food advertising and distribution. If obesity is understood to result from individual moral failure, then there should be little support for obesity target policies... a person's belief about where obesity originates will be an important factor shaping that person's policy views: those who see obesity arising outside the bounds of individual choice should offer more support to obesity policies, whereas those who see obesity arising from individual decisions will be less supportive.

Research has therefore focussed on linking public perceptions about the causes of obesity with levels of support for obesity prevention policies. Results consistently show that individual responsibility explanations for obesity resonate more strongly with the public than socio-ecological or genetic explanations, and that endorsement of individual responsibility explanations is associated with lower support for policy implementation (Barry *et al.*, 2009; Barry *et al.*, 2013a; Chambers & Traill, 2011; Diepeveen *et al.*, 2013; Gendall *et al.*, 2015; Hilbert *et al.*, 2007; Oliver & Lee, 2005; Sikorski *et al.*, 2011; 2012; Thibodeau & Flusberg, 2017; Thibodeau *et al.*, 2015). Consistent with findings from the Australian studies described in the previous section, studies examining the attributions of responsibility underpinning public views have found stronger endorsement for interventions inciting individual behaviour change than for more restrictive regulatory approaches (Beeken & Wardle, 2013; Chambers & Traill, 2011; Evans *et al.*, 2005; Hilbert *et al.*, 2007; Niederdeppe *et al.*, 2011; 2014; Suggs & McIntyre, 2011; Thibodeau & Flusberg, 2017; Thibodeau *et al.*, 2015).

For example, Barry and colleagues (2009) examined how the causal narratives that Americans hold about why people become obese affects support for policies. More than two-thirds of survey participants reported believing that 'sinful behaviour' was an important cause of obesity. Support for policies – including mandatory food labelling, advertising restrictions, and taxes – was lowest among these

participants, with the exception of a policy requiring health insurers to charge higher premiums for those who are overweight or do not exercise. In contrast, those who attributed obesity to 'toxic' food environments tended to support policy enactment.

Agreement with causal attributions for obesity, and endorsement of policies, has been found to correlate with the target of the interventions and individual characteristics. Those with a higher BMI have been found to be more likely to endorse socio-ecological explanations for obesity (Evans *et al.*, 2006). High levels of support for 'punitive' interventions (for example, allowing health insurers to charge obese people higher premiums) have been identified among people with a lower BMI, as well as among males and political conservatives (Thibodeau *et al.*, 2015). As well, lower levels of concern with the obesity crisis have been identified among men and younger people (Olds *et al.*, 2013).

Perhaps reflecting the perceived social vulnerability of children, support for child-focused obesity prevention policies is high, even among those attributing obesity to individual failings (Chambers & Traill, 2011). Women appear to be more strongly in favour of policies targeting childhood obesity than men (Evans *et al.*, 2005; Oliver & Lee, 2005), although overall support for child-focussed policies is higher than for policies targeting the general population (Chambers & Traill, 2011; Hilbert *et al.*, 2007). Parents tend to more strongly endorse government policy interventions addressing childhood obesity than non-parents (Hardus *et al.*, 2003).

Because of the misalignment identified between public attributions of obesity causation and public health socio-ecological explanations, public health proponents have argued that research and advocacy efforts should seek to improve

public knowledge about the socio-ecological causes of obesity (Dodson *et al.*, 2013; Dorfman, 2013). For instance, Walls and colleagues (2012, 99) have argued that better communication about the 'crisis' of obesity will help to generate public support for preventive obesity regulations:

Pressure on government to respond to obesity and chronic disease will surely grow as scientific evidence links obesity and poor nutrition to disease. Despite recent media attention the public remains poorly informed, often considering obesity to be an individual problem, requiring only diet restrictions and self-control.<sup>5</sup>

Research has therefore focussed on developing strategies to increase endorsement for regulations by changing attitudes about the causes of obesity (Barry *et al.*, 2009; Barry *et al.*, 2013a; Barry *et al.*, 2013b; Hilbert *et al.*, 2007; Niederdeppe *et al.*, 2011; Niederdeppe *et al.*, 2014). Gollust and colleagues (2013) examined how different framings of the consequences of childhood obesity might effectively persuade the public to endorse regulations. A message describing the long-term health risks of childhood obesity (including that 70% of obese children are at high risk for heart disease in adulthood) significantly increased participants' perceptions that childhood obesity is a serious issue, and was most effective in engendering support for regulations. Niederdeppe and colleagues (2014) conducted a similar study, in which they found that participants' support for obesity prevention regulations was higher among participants who read a narrative emphasising socio-environmental causes compared with those who read a narrative emphasising personal responsibility.

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<sup>&</sup>lt;sup>5</sup> Reality television program *The Biggest Loser* exemplifies this approach to weight loss, with 'everyday Australians with relatable weight issues' competing to lose weight through a strict diet and exercise regime overseen by personal trainers (Network Ten 2017). The program has been criticised for its unrealistic, unaffordable, and inaccessible approach to weight loss, and for perpetuating the discourse that obese people are lazy and grotesque (Thomas *et al.* 2007). There is evidence to suggest that the program increases viewers' perception that body weight is a matter of personal control (Yoo 2013).

However, in one of the few studies exploring the reasons underpinning public endorsement of individual responsibility attributions, Gendall and colleagues (2015) showed that stronger public endorsement of individual responsibility explanations was not associated with beliefs about the effectiveness of individual responsibility in reducing population obesity. Participants were more likely to believe that policy interventions, such as removing tax on fruits and vegetables, would be effective. Importantly, these findings reveal that public views about the appropriateness of regulations may not derive from a lack of understanding about the socio-ecological basis of the problem, but may rather relate to the influence of broader beliefs about obesity and the appropriate role of government in addressing the issue.

# Situating public views about obesity regulations in their moral and cultural contexts

The complexity of obesity as a public health policy issue is complicated by the significant moral and cultural dimensions of the problem. Drawing on the logic of attribution theory, much obesity policy research and advocacy seeks to correct public beliefs about obesity, in order to bring views into alignment with public health knowledges regarding the most appropriate and effective recourse to the obesity problem. With attribution theory conceptualising public beliefs about the causes of obesity and solutions to the problem as linear and unidirectional, this disciplinary logic lacks scope to consider the alternate rationalities influencing

<sup>&</sup>lt;sup>6</sup> Gendall and colleagues conducted their study in New Zealand, where the 15% Goods and Services Tax (GST) applies to fruits and vegetables. This compares with Australia and the UK where comparable taxes are not applied to fresh produce.

beliefs about the appropriate role of government in managing obesity and its social patterning (*cf.* Pykett, 2012).

Acknowledging the contingent power relations and systems of knowledge involved in defining obesity as problematic, sociological and anthropological health research has explored different worldviews attached to health, food, eating and obesity. This work has demonstrated the ways in which inequalities in material circumstances can impact emotional and interpersonal connections to food and bodies (Coveney, 2005; Warin *et al.*, 2015; Zivkovic *et al.*, 2015), and has established that lay theories about health are multi-factorial and cannot be classified into particular types of attribution (Popay *et al.*, 2003). These insights into the social, cultural, and emotive contexts of individuals' health behaviours have enabled theorisation of the interdependences of agency and structure that engender the socio-economic patterning of obesity. However, the impact of these contexts on endorsement for policy approaches warrants exploration.

In particular, the potential for moral rationalities to incite public support for preventive obesity regulations is under-theorised. While critical obesity scholarship has described an ideologically-driven moralism directed at obese individuals for their failure to maintain a 'healthy' weight, the consequences of widespread public anxieties about the obesity crisis for public endorsement of obesity policy has not yet been examined. Indeed, evidently overlooking prevalent moralism, some public health proponents have suggested that *increasing* the stigmatisation of obesity may generate momentum for regulatory reform, in recognition that demonising smokers and framing smoking as disgusting engendered tobacco reform (Callahan, 2013; Kersh & Morone, 2002b). For instance, Callahan (2013, 39-40) has proposed to induce social pressure on obese people

through uncomfortable questions such as 'are you pleased with the way you look?' or 'are you pleased when your obese children are called "fatty" or otherwise teased at school?'. While Callahan acknowledges that stigmatisation will not address the distal determinants underlying the socio-economic patterning of obesity, he argues that these tactics:

can change the background pressures—creating a potent force for public opinion, making it easier to use government to bring forth necessary regulations and prohibitions, shaming delinquent industries, and leaning on the public to take the problem more seriously.

There is therefore a need to critically examine how moral attitudes about obesity impact support for regulatory interventions, and the types of regulations that are endorsed. These 'unspeakable' (Grant-Smith & Osborne, 2016) aspects of the obesity problem constrain the ways in which obesity can legitimately be spoken about, the extent to which it can be discussed as a policy problem, and the inclusion or exclusion of relevant stakeholders from policy development processes. The *Opal* program in South Australia epitomises this: the acronym for *Obesity Prevention and Lifestyle* was adopted in all social marketing. This was explicitly chosen to avoid using the term 'obesity', as a means to silence the disgust elicited by the term (M Warin, personal communication, 12 April 2017). Describing the importance of situating policy reform within moralised cultural contexts, Grant-Smith & Osborne (2016, 50) have argued:

For many unspeakable policy problems the effectiveness of rational deliberative approaches to stakeholder engagement may be limited, as they are quite literally issues that planners and the planned will go to considerable lengths to avoid talking about directly. However, if such issues are not able to be openly spoken of it can, paradoxically, work to make them the object of political attention and political conflict which conceals the emotions underpinning them.

Taking as its starting point the conflicting and contingent knowledges defining the obesity epidemic as a problem worthy of government intervention, this thesis explores the moral rationalities and entwined socio-cultural contexts influencing public views about obesity regulations. In doing so, I reveal the constellations of knowledge and power that engender public support for – and thereby the political feasibility of – particular regulatory approaches to obesity prevention.

## **Summary**

In this chapter, I have outlined the emergence of obesity as an urgent social and political issue since the last decade of the twentieth century, and have described the ideological and discursive foundations of the epidemic. I have explained how the social determinants of health agenda dominating current public health research and practice has configured regulatory interventions as necessary and efficacious, with particular promise for addressing some of the most complex aspects of the obesity problem that existing behavioural health promotion measures have been unable to resolve; namely, an intense moralism attached to obesity, and its socio-economic patterning. With the prevailing neoliberal political economy resistant to regulations, I explored how public support for regulations is considered to be a key enabler for regulatory reform. Lastly, I have argued that moral obesity discourse and the dominant healthist culture provide a mandate to critically explore public views about regulations, in order to interrogate how these interventions may perpetuate dominant obesity discourses and existing social power structures.

## **Chapter Two**

# Theoretical underpinnings: the role of knowledge in governing obesity

Having provided an overview of current public health understandings about the role of regulations in addressing obesity and the role of public opinion in policy development process, I now map the theoretical terrain on which this thesis is located. I begin by locating the work within the field of critical public health, as a means to problematise the relationships between public health policy and matters of equity. I then expound the theoretical framework employed to explain the phenomena observed across the three studies comprising the thesis. This involves exploring the ways in which obesity is governed through disparate networks of knowledge and authority.

In particular, I describe the key Foucauldian theories of governmentality and biopower, and discuss how these concepts have been deployed to examine the role of norms and expert knowledges in governing obesity. Here, I build upon the discussion presented in Chapter One to describe how the imperative for individuals to manage their body weight is mobilised through government-sponsored health promotion materials and other diffuse forums, which are reliant on the presumption that knowledge is an instigator of behaviour change. This provides a foundation to explore how obesity has become replete with moral judgements in the prevailing neoliberal ideological climate.

In doing so, I draw attention to a gap in the current critical debate about the significance of this moralism to debates about the role of regulations in improving population health and health equity. Emphasising growing momentum in public health discourse away from the self-regulatory modes of governing obesity that typify neoliberal governmentality, I identify a need to critically engage with the current impetus for an enhanced role for the state in managing population weight through regulations. Finally, I introduce the concept of biopedagogy as an analytical lens to explore how the contours of what is deemed possible for regulatory intervention are shaped by the role of knowledge as the dominant mode of governing obesity.

## Critical public health

I adopt a critical public health perspective in undertaking this research because it advocates the need to marry together theoretical enquiry with applied research on matters of justice and equity. Critical public health is an approach that advocates a research agenda drawing on varied theoretical, disciplinary and methodological perspectives, in order to deconstruct 'taken-for-granted concepts and theoretical relationships by asking how these taken-for-granted elements actually relate to wider oppressive structures and how these structures legitimate and conceal their oppressive mechanisms' (Harvey 1990, 32 cited in Green & Labonté, 2007). This involves uncovering how social structures and the political, historical, and ideological contexts in which they operate construct the conditions which influence population health.

As Green and Labonté (2007) observe in the introduction to their book *Critical Perspectives in Public Health*, the role of critical research in the discipline has

become muddied by the adoption of what have traditionally been the core concerns of critical research in mainstream public health research and practice. Issues such as addressing health inequalities and their socio-economic determinants and the inclusion of public voices in policy making have emerged as key aims of the mainstream discipline in recent years. The profile of these issues on the public health agenda rose from the 1970s onwards under the auspices of the 'new public health' (Baum, 2008; Kickbusch, 2003; Petersen & Lupton, 1996). Born through the emergence of the field of social epidemiology, this 'new' public health expanded its focus beyond the contribution of individual behaviours to disease, to a social view that sees health and health risks as emanating from ecological and structural determinants (Baum, 2008; Kickbusch, 2003; Krieger, 2001).

Many have stressed the significant gains to personal and population health that can be made by addressing the supra-individual phenomena affecting the causation and distribution of ill-health across populations (Baum, 2008; Kickbusch, 2003). Others are more critical, arguing that despite its egalitarian and emancipatory rhetoric, the new public health may better be labelled 'the new morality' (Petersen & Lupton, 1996). This is because the new public health remains reliant on delineating normal and abnormal, healthy and unhealthy, and still seeks to resolve inequalities by 'fixing' the lives of those who are most vulnerable (Green & Labonté, 2007; Petersen & Lupton, 1996). In this way, the new public health is still an apparatus of governmentality (as discussed in the following section) despite its shift in focus from individual behaviours to socio-ecological determinants of health.

The focus of the new public health is the regulation of socio-ecological environments for the collective good. As such, what is considered 'good' and how

it is to be governed into existence are the starting point for critical public health research (Green & Labonté, 2007). This involves probing into the social practices of power and their relationships to stratification and health, in order to reflect on and challenge mainstream public health practice.

As Labonté and colleagues (2005) have described, while critical public health research draws on varied theoretical, methodological, and disciplinary approaches, it is united as a field of practice through deliberate engagement in three areas:

- 1. Theoretical engagement, specifically, the application of theories engaging with the nature of knowledge, social organisation, and social change.
- 2. Community engagement, including reflection on the role and form of civic participation in research to consider the friction between 'democratic' population health research and social action outcomes.
- 3. Policy engagement, involving consideration of what policy options are both critically desirable and possible within the constraints posed by the prevailing political, social, and economic conditions.

Addressing the first of these points, I expound the theoretical concepts informing the research project in the following section. These apply a neo-Foucauldian perspective to interrogate the interface of social power relations and contemporary health and public policy issues. However, it is first necessary to briefly explain how the thesis addresses the second and third points, in order to provide context for the research project and the theoretical approach.

In this thesis, I am centrally concerned with examining public views about the use of regulations to address obesity. As explained in Chapter One, public views about preventive obesity regulations are considered in mainstream public health research and practice to be an important influence on policy development. As such, public health researchers have sought to identify the most effective means to generate public support. I adopt a critical lens in examining public views about regulations in order to identify how social structures and constellations of knowledge and power influence which interventions achieve popular endorsement. In identifying how public support for regulations reflects the state of social power relations, I also explore how evidence and expertise deployed to influence public health policy development relate to wider regimes of knowledge/power. In doing so I examine how the institutions of public health relate to these regimes, and thereby how public health interventions may ultimately perpetuate existing power structures.

I now describe the theoretical framework underpinning the analysis.

# Governing bodies through 'healthy lifestyle choices': Foucauldian perspectives

Broad recognition that obesity is a crisis and should be a political priority has arisen through the intersection of authoritative medical and public health knowledges with culturally and historically contingent concern with the body as a political site. As such, Foucault's (1991) theories of governmentality and biopower have been taken up in critical obesity scholarship to examine the practices of public health in relation to the construction and regulation of obesity.

### Governmentality

Foucault employed the concept of governmentality to describe the strategies of governance concerned with populations. Emerging in the sixteenth century, governmentality marked a shift in relations between power and populations, wherein the state's concern moved beyond exercising sovereign rule over territory and those who occupy it, to a focus on the population itself. The focus of this new governmental endeavour became:

a sort of complex composed of men [sic] and things. The things with which in this sense government is to be concerned are in fact men, but men and their relations, their links, their imbrication with those other things which are wealth, resources, means of subsistence, the territory with its specific qualities, climate, irrigation, fertility, etc.; men in their relation to that other kind of things, customs, habits, ways of acting, and thinking, etc.; lastly, men in their relation to that other kind of things, accidents, misfortunes such as famine, epidemics, death, etc. (Foucault, 1991, 93).

Here, Foucault explains that governmentality is concerned with viewing the population as an object of government, in and of itself, as well as with the interdependences of the population and those resources ('things') which may impact on its vitality.

In its most recent incarnation, governmentality has been dominated by neoliberalism. As described in Chapter One, this emphasises individual freedoms and determination, and has arisen from the expansion of market logics to all realms of life. The rational, self-interested entrepreneur is the key tenet of neoliberal governmentality, responsible for the judicious management of their own lives under the guidance of distant expert discourses.

### **Biopower**

Strategies of governmentality are motivated by political interests in ensuring the health of the population. The concept of biopower (Foucault, 1976) describes the governance of the population through practices associated with the body. Foucault (1976, 139) explained that from the eighteenth and nineteenth centuries 'the disciplines of the body and the regulations of the population constituted the two poles around which the organisation of power over life was deployed'. The first of these poles – anatomo-politics – concerns the disciplinary techniques of power centred on the individual body in isolation of the broader collective. The second pole – bio-politics – instead operates at the level of the collective body '...through an entire series of interventions and *regulatory controls: a bio-politics of the population*' (Foucault, 1976, 139, emphasis in original). Biopower, then, is concerned with the disciplining of the individual body in order to secure the wellbeing of the state.

Biopower for Foucault 'has to do with an assemblage of historical intersections that are central to contemporary organisations of regimes of knowledge, power, and selfhood' (Koopman, 2014, 94). As such, the concept has been well documented in relation to obesity (Coveney, 2008; Crawshaw, 2012; Evans & Colls, 2009; Henderson *et al.*, 2009; LeBesco, 2011; Mayes, 2014, 2015; Mayes & Thompson, 2015; Petersen, 2003; Warin, 2011). This work has revealed the contingent knowledges and systems of power that represent obesity – that is, medicalised fatness – as a problem that threatens the security of the state.

### The role of expert knowledges

With the advent of biopower, a range of social and human sciences emerged to configure the population and its constituent bodies as objects of knowledge. These empirical methods, including demography, statistics, epidemiology, and the social sciences, became crucial elements of the complex of power/knowledge through which governmentality is exercised (Rabinow & Rose, 2006).

Governmental power became diffused among networks of norms established by these fields of expert knowledge. By providing norms against which individuals are measured and monitored, institutions such as medicine and public health have served to instil an internalised imperative to voluntarily confirm with public health goals through self-surveillance (Petersen and Lupton 1996). The circulation of norms established through these expert bodies of knowledge occurs through individuals 'voluntarily' embracing norms, and populations recognising and affirming them. Foucault termed these self-disciplining actions through which people monitor and regulate themselves in alignment with dominant systems of knowledge/power 'technologies of the self' (Foucault, 1988).

In the case of obesity, the expert knowledges that construct obesity as a disease category and public health problem are key to how obesity is governed. These scientific and medical authorities identify (and therefore constitute *in the real; cf.* Bacchi, 2009) the harms associated with particular body shapes, lifestyles and 'at risk' populations. For instance, the BMI operates to define as pathological those bodies for which the ratio of height to mass (squared) exceeds a threshold defined by expert biomedical knowledge, at which they are deemed to be at varying degrees of risk of ill-health resultant from their excess weight. Conversely, bodies

with a ratio of height-to-mass falling beneath the established threshold are deemed 'normal' and, by extension, healthy (Coveney, 2006; Gard & Wright, 2005; Harwood, 2009). By asserting a 'truth discourse' – that a BMI outside of the statistical 'norm' constitutes a health problem, and by extension a social and economic problem – interventions to reduce individuals' weight become legitimised.

Epidemiological research on the social determinants of health has traced health disparities to the unequal distribution of obesity across the population. This has operated to define 'healthy' and 'unhealthy' groups, and has thereby shaped subjectivities by designating the classification of 'risk' to individual bodies (Petersen & Lupton, 1996; Venkatapuram & Marmot, 2009). Petersen and Lupton (1996, 33) argue that epidemiology:

...is a practice of constructing 'problems', defining them and proposing ways of dealing with them in the context of 'ways of seeing' which shape the 'facts' that consequently emerge. Thus the 'patterns' identified by epidemiological research are not pre-existing, simply waiting to be 'discovered' using the right tools and insights, but are constructed through the expectations and processes by which they are detected.

Through the mechanisms of epidemiology, certain groups have been brought forth for more rigorous investigation and instruction about obesity, diets, and health. For example, Mansfield (2012) has described the 'epigenetic biopolitics' resultant from research linking maternal consumption of methylmercury-contaminated fish with abnormal foetal neurodevelopment. Owing to racial disparities in fish consumption, public health warnings disproportionately impact on women of colour and, in doing so, frame the diets of these women as abnormal and problematic.

The establishment of norms through bio-medical and epidemiological practices engenders bio-political governance. Through norms, the objectives of the state are entwined with the activities of individuals; defining problems impacting on the wellbeing of the population and integrating this information, via the route of a self-regulating subjectivity, into individuals' actions (McNay, 2009). The primary role for governments under the prevailing neoliberal governmental rationality has been to inform citizens about the risks associated with certain commodities in order to promote voluntary behaviour change, in order to secure collective wellbeing. Government-funded social marketing campaigns are a key example of how norms of health and the body are circulated to achieve bio-political objectives, but these are just one facet of a network of expert discourses circulated through medical examinations, the media, schools, BMI report cards, smart phone apps, personal trainers, wearable body trackers, economic analyses, and a plethora of other surveillance forums. As discussed later in this chapter, this is not to say that bio-power makes the state and the law redundant to the governance of populations. In the case of Australian obesity prevention, the role of the law has to date receded into the background, with individuals instead co-opted into the act of governing.

## **Anticipating obesity**

Central to the operation of biopower is the enfolding of the present and future. Foucault (1973, 119) explained that 'through the introduction of probabilistic thought' in the eighteenth and nineteenth centuries, the medical domain – and thereby the purview of self-governance – expanded infinitely. These probabilistic technologies have operated to 'define the normal in advance and then proceed to

isolate and deal with the anomalies given that definition' (Dreyfus & Rabinow 1983).

In response, public health has moved to a discourse of risk and prevention. The emphasis on anticipating and controlling future threats is such that we now live in a 'risk society' (Beck, 1992) in which 'we are no longer simply concerned with the governance of risk, but we are now in an era of governance by risk' (Rothstein, 2006, 215, cited in Fullagar, 2009, 109). Obesity is commonly portrayed as an unpredictable and imminent threat to the future, likely to overwhelm health systems and economies (Evans, 2010). It is this perception of obesity as a threat to the future nation that demands vigilance in the present and renders it governable. Massumi (2010, 53) explains:

Threat is from the future. It is what might come next. Its eventual location and ultimate extent are undefined. Its nature is open-ended. It is not just that it is not: it is not in a way that is never over. We can never be done with it. Even if a clear and present danger materialises in the present, it is still not over. There is always the nagging potential of the next after being even worse, and of a worse still after that. The uncertainty of the potential next is never consumed in any given event. There is always a remainder of uncertainty, an unconsummated surplus of danger. The present is shadowed by a remainder surplus of indeterminate potential for a next event running forward back to the future, self-renewing.

The result of this risk rationality is that the 'lifestyle choices' of individuals become problematised indefinitely. With obesity characterised as an imbalance between activities that are fundamental to human life (consumption of foods and drink and physical movement), everyone is susceptible: while it is bodies with a BMI of 30 or over that are defined as obese, all bodies are *potentially* obese. Individuals are never 'safe' from obesity but instead always exist on a spectrum of 'normal' to obese, with constant vigilance required to ensure the scales do not tip the wrong way (Boero, 2007; Evans, 2010; Mayes, 2015). As I explore in Chapter Four, the

effectiveness of this discourse derives from its capacity to engage emotions – including anger, disgust, and sadness – not only among those who are already classified as obese, but for all in fear they may become so.

## The obligation to choose health: morality and the responsible biocitizenry

Through the establishment of norms of body weight and the anticipation of harms resultant from noncompliance, diet and physical activity have become moral responsibilities (as described in Chapter One). Under neoliberal governmentality, citizens become 'responsibilized' through their competence as free, knowledgeable, and choosing agents (Rose, 1999). This presumes that individuals make their own assessments of risks and benefits when making choices about their consumption of commodities and their engagement in certain lifestyles (Lupton, 2013a; Mayes, 2015). Healthy choices have become a social and ethical obligation, such that the idea that individuals demonstrate personal responsibility via 'lifestyle choices' has become part of the moral landscape in Western liberal democracies (Elbe, 2010; Mayes & Thompson, 2015).

The concept of 'lifestyle choice' is a network of disparate knowledges which has brought all aspects of life within the scope of health. In employing the BMI to track the spread of obesity across the population, epidemiological research has linked body weight with a wide array of everyday activities, ranging from playing computer games, consuming processed foods, feeding infants formula, or taking particular modes of transportation (Mayes, 2015). The concept of 'lifestyle choice' has emerged as a key bio-political mechanism through which obesity is governed: by enfolding individuals' everyday activities with the future wellbeing of the

population, individuals' everyday actions regarding their food consumption and physical and leisure activities have been rendered visible as objects requiring responsible self-governance (Mayes, 2015).

The neoliberal obligation to choose health has given rise to the bio-citizen (Halse, 2009); a new form of human subject whose moral virtue is defined by assuming personal responsibility for ones' health, for both the benefit of the individual *and* the wellbeing of society. As described earlier this chapter, monitoring and measuring against the population norm works to entangle the individual body with the population. This works to configure personal responsibility as social responsibility, and renders visible deviant or abnormal individuals as in need of bio-political intervention (Mayes, 2015). Summarising this rationality, Markula (cited in LeBesco, 2011, 155) argues that:

Population statistics identify a new form of deviance, the obese body, that endangers the welfare of society. Individual citizens are now asked to locate themselves within the BMI scale, to confess being fat and to seek the appropriate bodily discipline (diet and exercise) to avoid becoming an economic burden for society.

## Biopedagogy: the body as a pedagogical site

With healthy lifestyles framed as a matter of rational, informed choice within neoliberal governmentality, the role of knowledge as a mechanism for healthy choices has been a key theme in the scholarship on obesity prevention. As such, recent critical obesity scholarship has conceptualised healthy lifestyle discourses as biopedagogy: 'the art and practice of teaching of life' (Harwood, 2009, 21). Biopedagogy describes those normalising and regulating practices which oblige individuals and populations to monitor themselves by increasing their knowledge about obesity (Wright & Harwood, 2009). The concept unites the Foucauldian

notion of biopower, described above, with particular understandings of pedagogy to theorise how the dissemination of knowledge and prescriptions about healthy living are used to secure the wellbeing of the state.

Different scholarly traditions employ the term pedagogy in different ways, and as such, the term can be taken up to describe a range of different practices. Following Lusted (1986), Wright (2009, 8) explains that biopedagogy is premised on readings of pedagogy as 'a relational social practice through which knowledge is produced. It is a practice that involves the negotiation of knowledge (ideas) in relations of power and one that goes beyond the classroom'. In this sense, biopedagogy encompasses the ubiquitous practices which instruct about the ways in which one should live.

Acknowledging that in a neoliberal society, individuals are 'ascribed responsibility for regulating and looking after themselves, though often according to criteria over which they have very little say or control' (Evans *et al.*, 2008, 14), the concept of biopedagogy has been used to account for the ways in which the social meanings, skills, and dispositions associated with obesity are transmitted. Critical scholarship has described a 'totally pedagogized society' (Bernstein, 2001), in which instruction about obesity prevention occurs across diffuse forums ranging from health promotion (Beausoleil, 2009; Fullagar, 2009; McPhail, 2013; Wright & Halse, 2014), schools and workplaces (Azzarito, 2009; Leahy, 2009; Rich & Evans, 2009), community programs (Burrows, 2009), and the media (Rail & Lafrance, 2009; Rich, 2011; Sukhan, 2013). The objective of these biopedagogies is to produce responsible bio-citizens, who internalise knowledge about the risks of obesity as a platform for self-regulation; optimising both their own health and the wellbeing of society.

### Biopedagogy as an analytical tool

Biopedagogies operate with the concurrent aims of optimising individuals' health and securing the wellbeing of the state. The entwinement of individuals and populations through the achievement of knowledge about health is reliant upon certain workings of truth, power relations, and modes of subjectification which, Harwood (2009) proposes, form the tools for analysing biopedagogies, as outlined below.

First, biopedagogies are engendered through 'truth discourses about the "vital" character of living human beings, and an array of authorities considered competent to tell the truth' (Rabinow & Rose, 2006, 197). This concerns the authorities, or pedagogues, who produce the truth and disseminate instruction. Central to this is the role of discourse. For Foucault, discourse represents the socially produced forms of knowledge that set bounds upon what it is possible to speak, write or think about as 'true' in relation to any given social object or practice (Foucault, 1972). Foucault proposes that these knowledges are formed through social and political interactions, and therefore suggests that language is performative; that 'discourses are practices that systematically form the objects of which they speak' (Foucault, 1972, 49). What can be spoken about as true is thus both contingent upon, and constitutive of, the social and political relations involved in its formation (Bacchi & Rönnblom, 2014; Foucault, 1976). Accordingly, the Foucauldian approach to discourse underpinning biopedagogical analysis is concerned with the systems of knowledge and the underlying ideologies and relations of power that enable particular ideas and modes of expression. Ball (1990, 17-18) usefully summarises this approach as being 'about what can be said, and thought, but also about who can speak, when, where, and with what authority'.

Second, biopedagogy is concerned with how these systems of power configure individuals as objects to be pedagogized. This involves asking 'what power relations make the strategies of speaking the truth possible? What relations of power make the pedagogue?' (Harwood, 2009, 24). Drawing on a Foucauldian view of power, this aspect of biopedagogical analysis sees power as a relational process that defines the relationships between individuals or groups (Dreyfus & Rabinow, 1983). Power does not inhere within individuals or groups, but rather comes to exist through networks of relationships and social interactions in which 'individuals are the vehicles of power, not its points of application' (Foucault, 1980, 198). As such, biopedagogical analysis is concerned with exploring the systems of power that define whose knowledge is legitimate and true, and who is rendered as recipients of instruction.

Finally, biopedagogy is enabled through the modes of subjectification that bring individuals to work on themselves, under certain forms of authority and in relation to truth discourses. Foucault was centrally concerned with the role of power in shaping subjectivities, stating that the object of his work had 'not been to analyze the phenomena of power... [but] to create a history of the different modes by which, in our culture, human beings are made subjects' (Foucault, 1983). This recognises that the relational circulation of power between individuals is an active process through which subjects are produced, shaping what it is possible to be through the exercise of discourses (Bacchi, 2009). Analysing networks of power and truth thereby reveals the particular modes of subjectification that render certain practices and bodies governable, and press certain individuals to increase their knowledge about obesity and denigrate them if they do not comply.

### Theorising the biopedagogies of preventive obesity regulations

Scholarship employing biopedagogy as a conceptual lens, and associated work examining the bio-politics of obesity prevention, has predominantly focussed on what McKee (2009) terms 'discursive governmentality'; that is, the ways in which individuals are brought to work upon themselves through the circulation of expert discourses. While this work has generated important insights into how instruction about obesity prevention is used to secure the wellbeing of the state (for example, by engaging children in neoliberal discourses of risk via health education employing disgust and shame; Leahy 2009), it has revealed little about the role and functioning of regulatory interventions within neoliberal governmentality and the prevailing neoliberal political economy. Indeed, Mayes (2015, 43) has argued:

Public health researchers suggest policies such as 'fat taxes', or bans on sugar-sweetened beverages. Although these suggestions are based on evidence supporting their efficacy, they are excluded from neoliberal arrangements due to the potential impact on the freedom of markets.

But, as I showed in Chapter One, there is building momentum for regulatory measures such as those named by Mayes both within Australia and globally. The implementation of taxes on sugar sweetened beverages in 22 countries and subnational jurisdictions globally (Duckett *et al.*, 2016) – including the UK and parts of the US, which have similar conservative neoliberal political economies to Australia – demonstrates that these interventions can indeed be realised as part of neoliberal political and social arrangements. This seemingly paradoxical impetus for regulations points to the changing practices of contemporary governing, in which traditional divisions between the state, the market, and the public have been reworked and blurred (McKee, 2009). Adopting McKee's (2009) charge to reinsert the state into analyses of governmentality within neoliberal regimes, I

therefore employ biopedagogy as a lens to critically interrogate the ideas about obesity that are transmitted through regulations.

Wright (2009, 9) explains that biopedagogy offers particular theoretical potential for understanding 'the ways in which ideas about obesity are taken up, transmitted and resisted by individuals, institutions and governments'. As such, I propose that the concept has much to offer an examination of the role of regulations in addressing obesity. Through a biopedagogical analysis, this thesis reveals that regulations achieve popular endorsement in the contemporary neoliberal climate because they serve an inherently biopedagogical purpose: regulations operate through socio-ecological features to *transmit knowledge* about what is healthy. Theorising the operation of biopedagogies in this way contributes to the task of interrogating what Rabinow and Rose (2006, 215) call an 'emergent moment of vital politics'.

## **Summary**

This chapter has examined the role of knowledge in governing obesity. I began by locating the research within the field of critical public health, an approach to public health research which inspires reflection on the ways in which social power hierarchies are enacted in public health practice. I then expounded the Foucauldian foundations of the project, describing the ways in which obesity has been rendered governable through norms established by disparate networks of knowledge. With lifestyle choices – part of the moral fabric of Western liberal democracies – framed as the cause of the obesity epidemic, I introduced the concept of biopedagogy as a means to explore the role of knowledge in protecting the state from the threats posed by obesity. Extending current theorisation of

biopedagogy, I argued that growing momentum for regulations to manage the obesity problem points to a need to critically analyse the current impetus for regulatory approaches to supplement existing self-regulatory modes of governing obesity. I outlined the analytical potential of biopedagogy, which draws attention to: authoritative truth claims; power relations; and modes of subjectification.

Adopting these analytical tools, I propose that biopedagogy enables exploration of the means through which regulatory interventions mobilise neoliberal imperatives in order to responsibilise (certain) populations to improve their knowledge about, and ultimately adopt, healthy lifestyles.

## **Chapter Three**

# The research process: problematising the influence of power on public opinion

# Examining public opinion: epistemological challenges and implications for power

Bringing a critical perspective to research on public views about preventive obesity regulations involves reflection upon the political value of public opinion and the assumptions which constitute it as a site worthy of research. Previous work on public views about regulations (as well as the overarching *HealthyLaws* project to which this thesis contributes) has sought to identify potential impediments and facilitators to the implementation of regulations. The starting point for this body of research, then, is the expertly-defined 'solution' to the obesity problem (preventive obesity regulations) and the roadmap to political reform (cultivating public support). The power relations embedded in this program of research, and the subsequent implications for public health policy and practice, have received little attention in critical scholarship to date.

A wide range of different social artefacts may be seen to constitute public opinion, contingent on the social climate, the practices of government, media, and other powerful institutions, and the technological milieu (Herbst, 1998). In some arenas public opinion is understood as an aggregation of individual opinions, best collected confidentially in order to ensure that individual views are isolated from external influences (Herbst, 1998, 16). This form of public opinion (most often

collected through surveys) assumes that views can be captured in discrete categories which, defined in advance of data collection, are conceptually meaningful to the researchers collecting the views. By seeking to be representative of the population on socio-demographic grounds, public opinion collected in this way tends to assume that power and influence are equally distributed across population sub-groups, despite some people having greater symbolic capital than others.

Previous Australian research examining public views about preventive obesity regulations (outlined in Chapter One) has derived from this epistemological basis, having predominantly employed survey methods. Findings from these studies have been used as an advocacy tool to lobby governments to implement regulations (e.g. Obesity Policy Coalition 2013; Obesity Policy Coalition & The Global Obesity Centre 2017). Differences in views observed between demographic groups have not been explored for their broader implications beyond potentially impeding policy reform agendas (and as discussed in Chapter One, this line of analysis has received relatively modest attention).

Other Australian studies employing citizens' juries to garner public views about obesity regulations (notably including Street *et al.* 2017 which was conducted as part of the *HealthyLaws* project) adopt an alternative epistemological conceptualisation of public opinion. Citizens' juries are an example of participatory action research, which emphasises the positive contribution of lay knowledge to policy development processes. While the method eschews the elitist influence of researchers and policy actors on public policy, like surveys, citizens' jury participants are explicitly recruited on the basis of socio-demographic representativeness (Veasey & Nethercut, 2004). As such, the method does not

account for the inequitable distribution of power among participants from different backgrounds and the fact that more powerful segments of the population are likely to have greater sway over policymaking processes.

Taking the influence of embedded power relations into account, public opinion may also be conceived of as popular sentiment. This narrative form of public opinion may be evident through interpersonal communications, media reporting, and the activities of interest, lobby, and advocacy groups (Herbst, 1998). This conceptualisation regards public opinion as fluid, multiple, dissonant, and malleable. From this perspective, understanding public opinion is less concerned with representativeness on socio-demographic grounds, instead acknowledging that public opinion may be differentially influenced by the concentration of power in more vocal, articulate, or legitimised population segments.

As this thesis is centrally concerned with how public support for preventive obesity regulations reflects and reproduces social power relations, I adopt this narrative conceptualisation of public opinion in order to generate understandings about how the views of some social groups may be marginalised in efforts for obesity policy reform. In order to do so, my research design draws on a problematisation approach, as outlined below.

## Problematising obesity: understanding power in policy

This research draws upon theoretical work on problematisations to critically examine the socially-constructed and historically-located phenomena underpinning public support for regulations. I employ Bacchi (2009)'s *What's the Problem Represented to be?* (WPR) approach to policy analysis to define a research

agenda that is critically engaged and facilitates the normative political objectives of critical public health research. The WPR approach is interested in investigating how knowledge/power (*cf.* Foucault, 1991) is engaged in the project of governance. Rejecting understandings of knowledge as an objective resource to be drawn upon to assist in governing, this approach acknowledges that governance occurs through the ways in which dominant forms of knowledge construct particular kinds of subjects, through the kinds of truth they produce. Bacchi (2009, 263, emphasis in original) explains:

Problematisations are framing mechanisms; they determine what is considered to be significant and what is left out of consideration. As a result, public policies create problems that channel and hence *limit* awareness of and sensitivity to the full range of troubling conditions that make up out existence. Because this is the case, it becomes crucially important to scrutinise the *ways in which 'problems' are represented in public policies*.

While Bacchi's approach is presented primarily as a methodology for analysing policy documents, she advocates a broader application to other sites in which the knowledge/power nexus influencing public policy is evident, in order to identify the problem-solving paradigms dominating the policy landscape (Bacchi, 2009, 262). Therefore, I suggest that this is a useful framework to analyse the discursive underpinnings of public opinions about obesity policy.

Bacchi's approach invites examination of the underlying social conditions that enable regulations to be posited as viable and necessary solutions to the problem of obesity. The approach suggests that policies constitute problems through the representations of problems implicit in their proposals for change. For example, policies seeking to address childhood obesity constitute this problem in many different ways: if the policy is to weigh children who come into contact with health services and provide referrals for healthy lifestyles education, then parents' lack of

awareness of their children's obesity is represented to be the problem; in contrast, if the policy is to provide vouchers to subsidise the costs of participating in sports, then children's lack of activity is represented to be the problem.<sup>1</sup>

The WPR approach aims to identify the conditions that allow particular problem representations to become dominant in shaping policy, in order to explore the effects of particular problem representations, and to reflect on possible alternative courses of action. Ultimately, the approach seeks to critically interrogate authoritative problem representations in order to identify sites for intervention to reduce deleterious effects. Quoting Dumont (1998, 233), Bacchi (2009, 45) summarises that the ultimate goal of a WPR analysis is:

...to develop strategic interventions 'in humanly-created narrations that try to justify the miseries of the poor' and of other outgroups... It directs attention to the ways in which identified problem representations secure their authority, and opportunities for disruption.

The WPR approach emphasises the contested nature of problems and how specific policies have come to be assumed as necessary responses. In highlighting the contingency of the particular problematisations and the role of power in producing dominant understandings, space for contestation is created. While Bacchi poses six specific questions to guide analysis, she also advocates an integrated approach wherein particular questions are foregrounded for their relevance to the research problem (Bacchi, 2009, 101). As such, the following questions have informed my research design and overarching analytical strategy:

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<sup>&</sup>lt;sup>1</sup> Both of these programs were announced in July 2017 as part of a multi-component strategy to tackle childhood obesity in New South Wales (NSW Government, 2017)

- What are the particular problem representations that enable or preclude public support for particular regulatory interventions?
- How do these problematisations constitute particular subjectivities as problematic, and as unproblematic?
- How have these problematisations come about? Who benefits from these problematisations, and who is disadvantaged?
- What is left unproblematic or silent in dominant problematisations? How could these be reimagined?

## Research design: sequential mixed-methods

This research is guided by a concern to render visible particular problematisations, in order to draw attention to the contingent knowledges and relational forms of power that allow particular problem representations to assume dominance. As such, I have employed an exploratory sequential mixed-methods design (Tashakkori & Teddlie, 2003, 227), grounded in qualitative discursive methods. This involved two phases of qualitative inquiry followed by a phase of quantitative analysis, as expounded below.

#### Online news reader comments

The first phase of the research was an affective-discursive analysis (Wetherell, 2012) of reader comments attached to obesity-relevant articles on Australian news and current affairs websites. As outlined in Chapters One and Two, obesity is a site of intense moral opprobrium in the contemporary neoliberal climate. The concept of a 'moral panic' has been deployed to account for the emotional valences of

obesity discourse, with disgust, horror, fear, and panic commonly invoked (Campos *et al.*, 2006; Monaghan, 2005; Monaghan *et al.*, 2013; Rich & Evans, 2005). Similarly, public health scholars describe hostility and disdain directed towards the 'nanny state' in debates about the role of preventive obesity regulations; pointing to the emotional force of neoliberal market fundamentalism in shaping attitudes about the kinds of obesity interventions deemed acceptable or otherwise. This study, presented in Chapter Four, examined how emotive discourses such as these shape public views about regulations to address obesity.

Examining the emotional valences of obesity discourse is important for understanding how public support for regulations can be an enactment of power. The resonances between emotion and power are evident when considering the types of narratives and subject positions that enable particular emotional displays about obesity: what boundaries are deemed to be transgressed when obesity is disgusting? Who or what is threatened when obesity is feared? How do these emotions confer value for those who are aggrieved? In what contexts can these grievances propel policy reform? I elaborate upon these themes in Chapter Four, drawing upon Ahmed's (2004) work on affective economies to consider how emotions about obesity function as a form of capital to protect certain interests.

An important methodological consideration is the relationship between emotion/affect and discourse. Some recent scholarship in the field of affect studies (e.g. Clough, 2007; Gregg & Seigworth, 2010; Massumi, 2002) has sought to

differentiate emotion/affect and discourse,<sup>2</sup> as illustrated through the following passage from the introduction to *The Affect Theory Reader* (Gregg & Seigworth, 2010, 1, emphasis in original):

Affect, at its most anthropomorphic, is the name we give to those forces – visceral forces beneath, alongside, or generally other than conscious knowing, vital forces insisting beyond emotion – that can serve to drive us toward movement, toward thought and extension, that can likewise suspend us (as in neutral) across a barely registering accretion of force-relations, or that can leave us overwhelmed by the world's apparent intractability.

In drawing a distinction between conscious knowing and affect, this conceptualisation detaches the visceral and social aspects of the ways in which people interact. This theorisation adopts a narrow view of discourse as both linguistic and rational that fails to acknowledge the role of emotions in how people come to know and understand the world (Wetherell, 2012; 2013). Instead, emotion may be conceptualised as a component of discourse, or at the very least, as inextricable from it: what Wetherell describes as affective-discursive practice, or 'embodied meaning-making' (2012, 4). That is, emotions are an important component of how people and situations are constituted and organised, and how power is expressed and maintained.

In seeking to understand how emotion is enacted in public support for preventive obesity regulations, this study examined interactions in online newspaper

In this thesis, I employ the term *emotion* to focus my analysis on the socially contextualised and performative function of emotions/affects in line with Ahmed's (2004) use of the term. Ahmed (2014, 207-8) subsequently explained that her use of the term was not a deliberate posturing against work on affect, but rather positions her work within existing feminist literatures on emotion. She states that her theorisation incorporates those processes that others have described as affect.

<sup>&</sup>lt;sup>2</sup> Relatedly, much work in the field of affect studies has sought to differentiate the concepts of *emotion* and *affect*, with the two terms tending to be defined against each other. Contention around these terms arises in part through the convergence of multiple scholarly traditions in the field of affect studies. For instance, Wetherell (2012) takes issue with the term *emotion* due to its usage in psychological scholarship to describe neurobiological cognitive processes. Instead, she prefers the term *affect* to describe socially contextualised emotions/affects operating to constitute (inter)subjectivities. This is in spite of her criticism that *affect* tends to be used by prominent scholars (such as those cited here) to describe pre-personal 'forces' that exist beneath the realm of language and social expression, and thereby elude analysis.

comment forums. As explained in the published article, social interactions occurring online are recognised to be disinhibited relative to face-to-face interactions: people are more likely to disclose particular views and emotions online owing to the increased anonymity, asynchronicity and invisibility (Suler, 2004). The online environment is therefore an apt setting for examining the influence of emotive moral discourses on public views about obesity regulations.

Online comments are an important, yet largely unexamined, site for research into obesity discourse. I argue that the vitriol evident in online comments is an important dimension of obesity discourse, and is therefore part of how obesity prevention regulations come to be understood. In a recent post, fat activist blogger *Your Fat Friend* described online comments as a passage into the 'acidic and corrosive words strangers are willing to say to fat people', providing a means for those of normative body weights to witness the harshness that fat people routinely face (*Your Fat Friend*, 2017). The methods adopted in this study enable insight into the influence of vitriolic views on public support for regulations, which may not be apparent in a researcher-led setting.

Owing to the limited space in the published article, I expand upon the research design and analytical methods employed in the study below.

#### **Sources**

Data for the study were drawn from fourteen Australian online news and current affairs websites. These include sources from each state/territory as well as national sources, in order to enable analysis of reader comments about a broad range of obesity regulations proposed or implemented across all Australian legislative jurisdictions (federal and state/territory levels).

Sources were also selected for diversity of political orientation and editorial bias. Media ownership in Australia is highly centralised, with News Limited and Fairfax Media owning the majority of national and capital city newspapers (Watkins *et al.*, 2016). News Limited newspapers in particular exhibit an economically libertarian, socially conservative editorial bias. Owing to the potential for this to influence reporting about preventive obesity regulations, public and independent not-for-profit news and current affairs sources (ABC and The Conversation) were included in the sample as a means to diversify the political orientation of the media reporting. I had anticipated that the views expressed in the reader comments would align with the editorial biases of the news sources. Interestingly, however, I observed no such alignment between the political leanings of the media outlets and those apparent in the attached reader comments.

Selection of sources for inclusion was complicated by the novelty of online news as a research medium at the time the research was conducted in 2013. At that time, readership data for online news was not available, with only data for print newspapers available to inform the sampling frame. It was therefore not possible to develop an objective sampling framework based on market share of online news readership. Instead, I drew upon my personal knowledge of the Australian media landscape to purposively select a diverse sample of media outlets. I took into consideration print news readership and television news ratings data, whether news outlets allowed reader comments, and the average volume of reader comments per article.

#### Search strategy

A two-phase search strategy was adopted. First, articles about obesity published in 2013 on the selected Australian news websites were identified via the Factiva database. The study period was selected for currency, and for the prominence of obesity prevention policies in the media at that time: the Health Star Rating system was endorsed in June 2013 following a two-year negotiation period, and the Greens (the 'third party' of Australian politics) went to the 2013 federal election on a platform to ban 'junk food' advertising to children on commercial television. Internationally, a ban in New York City on sugary drinks larger than 16 ounces was overturned in early 2013.

Search terms were developed to capture articles explicitly reporting on impending and potential regulatory measures, as well as to locate articles about obesity in general (that is, not in the context of public health interventions). This approach was adopted in order to enable examination of whether, unprompted, readers discussed regulations as solutions to obesity. Search terms are presented in the published article in Chapter Four.

Articles were deemed out of scope from the initial sample if the major focus was not on human obesity; if the article reported on diet, weight loss or nutrition not in the context of obesity; and if the article discussed obesity research conducted on animals. Corrections, letters to the editor, advice columns, 'vox pops', television, book or film reviews, and summary indexes for print news were also excluded. This process yielded a final sample of 965 in-scope articles.

The second phase of the search strategy involved locating in-scope articles in original format on the news outlet websites, in order to determine whether reader

comments were attached. Those with reader comments were retained for analysis using QSR NCapture software, an extension for NVivo which enables webpages to be downloaded into NVivo for analysis as they appear online. This enabled news articles and associated non-text content (such as images, pull-out quotes, and nesting of reader comments in reply to one another) to be retained to provide context for the analysis of reader comments.

The final sample comprised 3,636 reader comments attached to 83 news articles. Articles had between one and 568 comments,<sup>3</sup> with an average of 44. The characteristics of the final sample of articles are presented in Appendix A.

#### **Analysis**

The analytic process began while searching for in-scope articles on the news websites, as it was through this familiarisation process that I was able to identify patterns in the ways readers spoke about obesity and regulations. Once the final sample had been loaded into NVivo, I undertook further close reading, making notes about common tropes and themes that began to emerge. This was followed by a process of open coding of comments line-by-line, with particular attention to the causes of and solutions to obesity discussed, per Bacchi's (2009) WPR analytic approach. The next phase of coding, referred to as axial coding (Liamputtong & Ezzy, 2005, 269), involved identifying dominant themes and subject positions in order to develop the overarching narrative linking the codes together. These first

<sup>&</sup>lt;sup>3</sup> The article with 568 comments is an outlier, as illustrated in the table of final sample characteristics presented in Appendix A. This article, titled *Fat mums behind obese kids: Hopkins*, reports on comments made by an English social commentator named Kate Hopkins. Hopkins is quoted as saying 'Behind every fat child is a fat mother who should take full responsibility...It's absolutely the parent's fault that those children are fat. They need to look in the mirror, look at themselves, and realise it's their fault.'

The article can be viewed online at http://www.9news.com.au/health/2013/10/15/09/12/hopkins-offends-again-about-obese-kids#XK4XoVGbGoJZfyaB.99 however reader comments are no longer attached as the website format has subsequently been updated.

phases of the analysis were focused explicitly on the narrative aspects of discourse rather than the emotive aspects, although as described above, the distinction between emotion and discourse is indistinct and some overlap in the stages of analysis occurred.

I then performed a second stage of analysis to identify the emotional valences of the themes that emerged from the first stage. As described in the published article presented in Chapter Four, this involved coding for overt pronouncements of emotion through declarative statements, punctuation, use of obligatory language, evaluative accounts, and metonymy and metaphor. This stage of coding, which can be described as a form of selective coding, (Liamputtong & Ezzy, 2005, 269), involved a restructuring of codes from the first stage of analysis to draw together themes with similar emotive underpinnings. For example, the key theme of *Distrust* described in the published article emerged from the disparate codes of *Reject regulations–futile, Medicalisation–excuse, Personal responsibility for obesity*, and *Political correctness*. These themes shared similar emotional valences such as frustration and contempt, which operated to 'surface' (Ahmed, 2004b) a 'righteous victim' subject position and engender support for hard-line or punitive regulatory approaches.

#### Ethical considerations

The methods adopted for this study presented unique ethical considerations which, owing to the diverse and changing nature of online research environments, there exists little formal guidance for resolution. These ethical issues are addressed briefly in the published work presented in Chapter Four, and are elaborated on here. My investigation and deliberation of online research ethics undertaken in

preparation for this study formed the basis of a book chapter co-authored with one of my PhD supervisors (Street & Farrell, 2017), upon which the discussion presented below is based.

To collect data for this study, I collected interactions from discussion forums without participating or making my presence as a researcher known. Data collection therefore departed from more traditional research methods for eliciting public views such as focus groups or surveys, as the research participants were not made aware at any stage that the data they created has been used for research purposes.

Whether online interactions can ethically be used as research data without informed consent hinges on whether these interactions are considered public or private (AoIR, 2012; Eysenbach & Till, 2001). If publicly available, some researchers argue that social media interactions are a legitimate source of research data akin to other forms of media (Kraut *et al.*, 2004). Others, however, draw attention to individuals' expectations of privacy in their participation in online forums and that the intended purpose of their online interaction was not to participate in research (Kozinets, 2002). Kozinets (2002) advocates a cautious approach to the private-versus-public issue, including full disclosure of the researcher's presence and intentions, obtaining informed consent, and ensuring confidentiality. He proposes that this may occur prospectively, by requesting permission to observe online interactions and giving community members the opportunity to withdraw from the social media forum for the period of the study, or retrospectively, by contacting individuals in order to obtain their consent to replicate postings.

These requirements are argued by other researchers to be overly stringent in some situations, particularly where disclosure of the research project may influence interactions and therefore impair data quality (Elliott *et al.*, 2005). Instead, the Association of Internet Researchers (AoIR, 2012) advocates that social media research ethics should be considered in terms of the specific research context. Eysenbach and Till (2001) propose the following guidelines to determine whether informed consent is required or whether covert observation is permissible:

- Intrusiveness: is the researcher a passive observer or an active participant in the online community being researched?
- 2. Perceived privacy: what are the community's expectations of privacy?
- 3. Vulnerability: how vulnerable is the community? (For example, support forums for victims of sexual abuse would be considered highly vulnerable)
- 4. Potential harm: As a result of the above, is the use of data for research purposes likely to harm individuals or the online community?

In light of these considerations, and the fact that the views expressed could not have been obtained through other methods, I contend that covert observation was appropriate for this study. As a passive observer of a publicly accessible forum, I did not intrude into any established communities; the overtly public nature of news comment forums mean that forum participants would have low expectations of privacy; and news comment forums are transient and are accessible by the general public, rather than a specific community, so no vulnerable groups were targeted. Therefore, the potential for harm to individuals could not foreseeably have been increased due to the use of data for research purposes.

Further, obtaining informed consent would have been impractical: disclosing the research project in advance of data collection would have been impossible as the forums were linked to news articles about emergent events. Seeking consent retrospectively would not have been possible as most posts were made anonymously, or in the absence of contact details.

## Focus groups

The second study undertaken for this thesis was a discourse analysis of data from semi-structured focus groups held in socio-economically distinct areas of Adelaide, South Australia. The analysis examined how obesity is problematised (Bacchi, 2009) differently by those in advantaged and disadvantaged social groups, and how this relates to support for regulations. This work is presented in Chapter Five.

This study was conceptualised while undertaking the analysis of reader comments, as findings from that study revealed a dissonance between the public health rationale for preventive obesity regulations and the public discourse around regulations. As described in Chapter One, public health scholarship describes regulatory interventions as addressing socio-ecological drivers of obesity, and thereby as likely to attenuate the disproportionate burden of obesity among those from low socio-economic positions. However, a dominant theme in the reader comments was that regulations are a means to institute moral culpability for irresponsible lifestyle choices, with the voice of those aggrieved by these 'irresponsible choices' prominent in the reader comments. Socio-ecological explanations tended to be rejected. As such, in this study I was concerned to explore this disconnect, by examining how socio-ecological logics figure into moral culpability arguments. As well, the views of those who believed their health/dietary behaviours would be impacted by regulations were silent in the

reader comments in Study One. I was therefore interested to engage with those from low socio-economic circumstances commonly targeted by public health interventions, in order to explore their subjectification in relation to regulations.

## Recruitment and participants

Prior to recruitment, the study received approval from the University of Adelaide Human Research Ethics Committee (HREC Approval Number H-2014-266; Appendix B). Participants were drawn from two local government areas (LGA) in the Adelaide metropolitan area, purposively selected for socio-economic disparity. These were Burnside (Area A in the published article presented in Chapter Five), which lies adjacently to the east of the Adelaide CBD, and Playford (Area B in the published article), which is on the outskirts of the Adelaide metropolitan area approximately 30 kilometres to the north of the city. I selected these areas partially due to their personal relevance: my extended family are from the outer northern suburbs; and I went to school in Burnside and lived in the area as an adult. The socio-economic and class differences between the areas are therefore intimately familiar to me. My selection of these two areas for the comparative analysis is supported by Census data which shows that Burnside is the most advantaged LGA in South Australia, while Playford is the most disadvantaged LGA in the Adelaide metropolitan area (ABS, 2014b).

Participants were recruited throughout December 2014 via posters displayed in public libraries, council buildings, shopping centres, medical centres, and the offices of Members of Parliament in the Playford and Burnside LGAs, as well as through an event page on my personal Facebook account, and snowball referrals. Recruitment materials are presented in Appendix C. I shared the Facebook event

on public Facebook pages including those of shopping centres in each LGA. Most participants (28) were recruited via posters in public places, with four recruited via the Facebook event.

Potential participants were screened to confirm their area of residence, with those residing outside of the target LGAs excluded from participation. As well, those known to me personally were excluded. A balanced representation of gender, age, and parents/non-parents were sought in each area. Despite this, women (75%) and parents (60%) were over-represented in the final sample. Participant characteristics are presented in the published article presented in Chapter Five, and participant information materials are presented in Appendix D.

#### Focus group sessions

One of my PhD supervisors and I co-facilitated the focus groups in January 2015, with the Playford sessions held in the week after those in Burnside. Sessions were held in meeting rooms in local council buildings in each LGA in order to facilitate accessibility for participants. As described in the published article, two focus group sessions were held in each LGA, each with seven to nine participants and lasting 60-80 minutes. We followed a semi-structured format using a focus group schedule developed from Bacchi's (2009) WPR approach to policy analysis. The focus group schedule is presented in Appendix E.

In each LGA, focus group sessions were run in the early afternoon and early evening. This was initially designed to facilitate a comparison of views between principal caregivers of young children and those without such caring responsibilities, as a means of exploring some of the gendered aspects of public views. However, recruitment along these lines proved difficult and as such,

participants were invited to attend their preferred session regardless of their parental status.

Data collected from the focus group discussions were valuable for building upon the findings from the online news comment analysis: as an interactive rather than observational research setting, I was able to probe participants' accounts in order to elicit a more nuanced picture of the reasons for support/opposition to preventive obesity regulations. I asked for the groups' reflections on dominant accounts of obesity and why different regulatory approaches were seen as appropriate solutions. This probing helped me to get closer to the reasonings employed by the participants, and to uncover divergence in views. As well, with the Playford sessions taking place after the Burnside sessions, I was able to elicit reflections on key themes evident in the Burnside sessions in order to facilitate the comparative analysis.

Field notes were taken by both my supervisor and me during the focus groups, to document the topics of informal conversation while waiting for the sessions to start, the appearance of participants, the physical environments in which the focus groups were held, keywords, and other notable occurrences. These notes reflected clear social class differences between the groups. For instance, three participants in the Playford afternoon group smoked cigarettes outside the venue while waiting for the session to start. Some participants in this group had evidently low literacy levels, struggling to complete the demographic form (Appendix E): one participant commented 'I'm not good with forms and stuff'. A majority of participants in Playford were observed to be overweight/obese.

In contrast, our notes described the Burnside groups as well-educated and highly health conscious. One participant brought along a copy of a book about obesity discussed recently on the *Health Report* on ABC Radio National to show me.

Another participant distributed flyers for the low-fat cookware that she sells to the other participants, as well as to my supervisor and me, after the session. Only one participant in Burnside was observed to be overweight.

### **Analysis**

Preliminary analysis of data took place as I transcribed the audio recordings of the focus group proceedings and listened to the recordings while re-reading the transcripts to check accuracy. This process enabled me to develop a high level of familiarity with the data, and to identify commonalities and differences between each session. I took notes about my key observations for more detailed consideration during the next phase of analysis.

Following transcription, I began the process of critically analysing the discourses evident in the focus group discussions. This was based upon Bacchi's (2009) WPR framework, with the following questions guiding the analysis:

- 1. How is obesity represented as a problem in the interventions endorsed/rejected by participants?
- 2. What presuppositions underpin these representations of the problem of obesity?
- 3. How have these representations of the problem come about? Through which contingent practices and systems of power/knowledge have these understandings of obesity emerged?

- 4. What is left unproblematic in these problem representations? Where are the silences?
- 5. What effects are produced by these representations of the problem? What subjectivities are produced? Who is likely to benefit and suffer from the proposed interventions?

I used NVivo to code the transcripts line by line. During the initial stages of analysis, I used open coding to experiment with the conceptual organisation of the data. The subsequent stages of analysis involved a process of axial coding, in which I re-read the themes and drew together sub-themes to develop the central narrative. This also involved comparing the ways the different groups problematised obesity to identify silences in the ways obesity was thought about. It was during these final stages of analysis that knowledge/ignorance emerged as the key theme structuring views about preventive obesity regulations, and the importance of classed identities for views about regulations became apparent.

### **Cross-sectional survey**

The third stage of the research was a cross-sectional survey of people aged 15 years and over in South Australia. This work is presented in Chapter Six. I utilised the 2014 Health Omnibus Survey, an annual face-to-face survey representative of South Australians aged 15 years and over. The survey was conducted by Harrison Research, a private health research organisation, with methodology overseen by Population Research and Outcome Studies (PROS) at The University of Adelaide (PROS, 2017). Fourteen organisations, including government departments, nongovernment health organisations, and academic researchers contributed questions to the survey. Topics included arthritis, smoking, mental health, diabetes, alcohol

consumption, weight loss, and obesity. A condensed version of the survey describing major topic headings, as well as our questions about preventive obesity regulations, is presented in Appendix F.

A cross-sectional survey may appear to sit uncomfortably in a critical examination into public views about preventive obesity regulations, particularly given the concerns with epistemology and representativeness described at the start of this chapter. That is, from a critical stance, the level of public support for regulations ascertained by the survey is problematic because, in aggregating the views of those in different social groups, the method erases social contexts that may impact the views expressed, and may impede or amplify their influence on policy. However, perhaps indicating the dominance of quantitative evidence in public health policy development (discussed in Chapter Six), the survey was a key component of the ANPHA-funded *HealthyLaws* project. I therefore elected to take responsibility for this aspect of the research in order to explore the theoretical, methodological, and empirical differences in public opinion gauged via qualitative and quantitative methods. Importantly, my analysis is primarily comparative; building upon the findings of the focus group study and sociological literature to interrogate how views differ according to socio-economic status, as well as by gender and age. The study therefore examines how views about preventive obesity regulations map onto existing power structures, rather than disregarding the importance of these structures. As such, it overcomes some of the concerns with representativeness described earlier in this chapter.

Participant characteristics and analytical methods are described in detail in the manuscript presented in Chapter Six. Ethics approval for the survey was obtained

by Harrison Research from the University of Adelaide Human Research Ethics Committee.

#### Questionnaire

Four survey questions asked about levels of support for a set of potential regulations: mandatory front-of-pack labels for packaged foods; exclusion zones for new fast food outlets near schools; a tax on unhealthy high-fat foods; and a tax on sugar-sweetened beverages. These regulations were selected as they were found in the analysis of online news reader comments to be contentious, or to have unexpected reasons for support or opposition. A further four questions asked about the reasons for support or opposition to the regulations, in order to investigate the range of ways that regulations can be supported and rejected. A number of demographic questions were also asked.

The questionnaire also included four questions investigating alignment with values about welfare, individual responsibility, government prioritisation of health and the economy, and government trustworthiness. These domains were identified through the study of online news reader comments as impacting on views about the acceptability of preventive obesity regulations. Questions were modelled on items from the World Values Survey (World Values Survey, 2014). While I developed and tested these questions, data were not analysed as a component of my PhD research.

To develop the questionnaire, I undertook 24 cognitive interviews (Willis, 2004) with a convenience sample in two socio-economically and demographically diverse areas of metropolitan Adelaide. This testing method involved asking respondents to reason aloud as they interpreted survey questions and arrived at their response,

with the aim of maximising alignment between respondents' interpretations and the intent of the questions. For instance, one question in the final questionnaire asks:

Are you in favour or against government taxing unhealthy foods that are high in fat?

This wording was adopted owing to a lack of clarity around the concept of 'saturated fat', and the need to clarify that the regulation would not target 'healthy' fats such as avocado or olive oil. While the sentence structure and terms used appear somewhat awkward, this wording resulted in the most consistent interpretation among respondents.

A further 50 pilot interviews were conducted by Harrison Research prior to the survey going into the field. This process identified some common responses for which predetermined response codes were created, in order to minimise recoding of 'Other (specify)' responses.

## Processing and analysis

Survey data were provided as an SPSS data file on CD, after being edited and missing responses followed up by telephone by Harrison Research. I undertook final processing of the data file, which involved coding of 'Other (specify)' responses to questions asking the main reason for support or rejection of the regulations. To code these responses, I analysed the text entries thematically line-by-line, as for the coding undertaken for the analyses of reader comments and focus groups. Similar responses were grouped together and labelled in alignment with key themes from the previous two studies.

Processing also involved merging the *Socio-economic Index for Areas – Index of Relative Socio-economic Disadvantage* (IRSD) indicator, derived from 2011 Census results (ABS, 2013b), to assign an index of socio-economic disadvantage to each respondent based on their postcode. This index reflects the average level of socio-economic disadvantage in an area based on attributes such as low income, low educational attainment, high levels of public housing, high unemployment, and jobs in relatively low-skilled occupations (ABS, 2013b).

As an area level rather than individual level indicator of socio-economic status, the same IRSD score is attributed to all respondents within a geographical region. This poses limitations for the interpretation of results, as only general interpretations about the relationship between socio-economic disadvantage and views about regulations are possible. Use of individual level alternative indicators (such as income, occupation, or education) might have enabled greater theorisation of the pathways through which individuals come to express particular views about the acceptability of different preventive obesity policy options. As well, the IRSD indicator homogenises the views of individuals, as if all who reside in a particular location have access to identical socio-economic resources.

I chose to use the IRSD rather than an individual level indicator of socio-economic disadvantage in line with the socio-ecological rationale of public health efforts to reduce obesity-related health inequities, which emphasises the entwinement of place and health. This draws on evidence to suggest that socio-economic inequalities in health do not exclusively reflect the socio-economic composition of individual residents, but rather that wider contextual and environmental influences transcend the characteristics of individuals (King *et al.*, 2006; Matheson *et al.*, 2008). The extent to which *views* on matters pertaining to health rather than

health *status* are mediated by area-level rather than individual-level characteristics is unclear. However, the focus group discussions presented in Chapter Five were illuminating in this regard: in Playford (the disadvantaged area), there were clear differences between the socio-economic resources of participants in the afternoon session compared with participants in the evening session, with evening participants notably more advantaged. However, views expressed about regulations were mostly consistent between these groups, while differing markedly from the views expressed by those in the focus groups in Burnside (the advantaged area).

Analysis of the survey data involved comparing the proportion in support of the regulations and frequency distributions of reasons for support or opposition between different demographic groups. Confidence intervals were calculated for proportions and compared between groups in order to identify where no overlap occurred (indicating a statistically significant difference). Analyses were performed using SPSS version 22.

## Integration of the sequential mixed-methods approach

Integration of the three components of the research occurred through sequential implementation, as well as during the interpretation phase for convergence of findings. This is depicted in Figure 9 and is explained below.

Sequential integration of Studies One (analysis of reader comments attached to online news articles) and Two (focus groups) occurred during the development of the second study. As explained above, Study One findings pointed to a need to undertake a comparative analysis of views between groups differently

problematised in relation to obesity. This formed the basis of Study Two.

Sequential implementation also occurred during interpretation of Study Two results, as themes arising through both studies converged to corroborate findings generated through each study about the moral and classed underpinnings of public views about preventive obesity regulations.

Sequential integration of the survey with the qualitative phase of the research occurred during development of the questionnaire, with regulations selected for inclusion of the survey based on findings from Study One. Interpretation of survey results also drew upon findings from Studies One and Two in order to corroborate and expand upon results.

Findings from each of the three phases of the research are integrated through synthesis and interpretation of results from the research program as a whole. This work is presented in Chapter Seven.

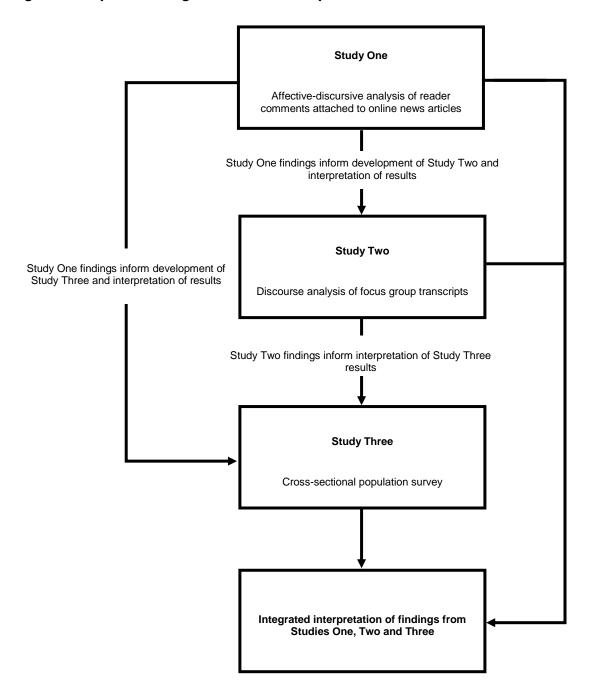


Figure 9: Sequential integration of research phases

## **Chapter Four**

# Enacting moral culpability through preventive obesity regulations

This chapter presents the first empirical findings of the thesis. As outlined in Chapters One and Two, obesity is a site of intense moral condemnation in the contemporary Australian cultural climate shaped by neoliberalism and healthism, wherein the pursuit of health is a moral end in itself. A large body of social science research has traced the presence of moral individualising discourses of obesity across the public domain. However, research examining public support for obesity interventions has to date not engaged with this literature. The published article presented in this chapter addresses this gap, by examining the ideological and discursive underpinnings of public support for preventive obesity regulations.

As Fraser and colleagues (2010) have argued, critical research describing a 'moral panic' about obesity points to the role that emotions play in generating social and political effects. However, the nature and function of emotions within obesity discourse remain undertheorised, to the detriment of a holistic understanding of the proliferation, intensity, and influence of obesity discourse. As such, in this chapter I employ emotion as an analytical lens to explore public support for regulations. I draw on Ahmed (2004b)'s theorisation of emotions as relational and constitutive of subjects and collective bodies to argue that emotions expressed about obesity and the role of government in addressing the problem position regulations as a means to protect the normative neoliberal subject from the bio-

political threats posed by obesity. With regulations situated within a discourse of culpability and control, the article demonstrates how governments' use of regulations to address obesity can be understood within the context of dominant neoliberal individual responsibility discourses. This is in tension with the explicitly socio-ecological rationale for these measures.

The section below introduces the published article by describing how it advances current theorisation of the role of emotions in governing obesity. I explain how emotions expressed in relation to preventive obesity regulations operate to enact power by producing valued and value-less collectivities. As well, I demonstrate that emotions in obesity discourse perform an explicitly bio-political function: through their subjectification effects, emotions operate to constitute obesity as a threat to collective (economic) wellbeing, and thereby legitimise particular policy responses to obesity.

## The action of emotions in obesity discourse

Critical obesity research has attended to the role of emotion in obesity discourse (Evans, 2010; Fraser *et al.*, 2010; Fullagar, 2009; Lupton, 2013b, 2015; Rich, 2011). In particular, Fraser and colleagues (2010) draw on Ahmed's (2004a, 2004b) theorisation of the performativity of emotion and feminist accounts of fat/obesity to argue for a greater engagement with the action of emotion in mediating complex relations between the body, fat, and the social. The authors point to the role of emotion in performing social and political collectivities (for instance, reinforcing moral boundaries against the poor). They therefore move beyond existing theorisation focussed on the ways in which the emotional valences of healthy lifestyle and obesity discourses incite certain forms of bio-political action

on the part of individuals and families (e.g., Fullagar, 2009; Leahy, 2009; Rich, 2011) to describe how emotion engenders and expresses particular politically-articulated forms of order.

In the paper presented in this chapter, I take up Fraser *et al.*'s (2010) invitation to analyse the productive, relational, and political action of emotion in the current societal concern around obesity. In theorising how emotional cultures (Clarke et al., 2006; Wetherell, 2012; Williams, 1977) intersect with affective economies (Ahmed, 2004b), the paper generates new knowledge by describing how emotions in obesity discourse function to shape subjectivities and collectivities that legitimise pre-emptive bio-political action.

As Evans (2010) describes, emotions play a central role in the anticipatory biopolitical governance of obesity. She argues that the fleshy materiality of obese
bodies is a temporal embodiment that enables pre-emptive bio-politics. Obese
bodies, and those of children in particular, represent risks to the future wellbeing
of individuals and populations. Emotions incited, such as guilt, shame, and fear,
are key to pre-emptive bio-politics as they operate to make dystopian futures
marked by obesity *felt* as realities in the present; enabling action under the rubric
of 'prevention'. Evans argues that it is this *emotive* perception of obesity as a threat
that legitimises pre-emptive action to quash the potential danger; obesity policy is
not engendered through 'scientific facts' which serve to *know* the future impact of
the obesity problem, but rather primarily through 'affective facts' which make
potential for future harm *felt* in the present (Evans, 2010).

Building upon the third bio-political vector identified by Harwood (2009) to enable biopedagogical practice (discussed in Chapter Three), I argue that it is the

subjectification effects of emotions that bring dystopian obesity futures into the present, legitimising anticipatory bio-politics. Who is constituted as the threat, and who is threatened? What relations of power do these subject positions draw upon to configure obesity as a threat? What truth claims are deployed to configure certain regulatory interventions as legitimate responses?

In the published article, I address these questions, detailing how emotions expressed about preventive obesity regulations are premised upon neoliberal economic and individualising discourses of obesity. These constitute obese people (and mothers of obese children) as posing a threat to the economic wellbeing of the nation, and by extension, as a threat to its moral fabric. The righteous and indignant emotional valences engaged in this boundary-marking constitute the limits of proper personhood; a legitimate collectivity who actively and astutely makes choices in the interests of the economic state. This is exemplified in the paper through emotions expressed about the use of so-called 'fat taxes': as Cooper (1998, 83) has observed, the interests of the 'taxpayer' figure 'are equated with efficient, cost-effective services and business-like practices'. The surfacing of this collectivity operates to align the interests of the taxpaying public – threatened by obesity despite their adherence to self-regulatory norms – with the interests of the neoliberal state.

The subject position overwhelmingly produced through the emotions expressed in the reader comments was that of an aggrieved member of the body politic, threatened by the economic risks of obesity. Reflecting on the two poles of biopower described in Chapter Two, regulations were deemed acceptable because of their *bio-political* power to protect the population's (principally economic) wellbeing. The *disciplinary* power of regulations – to improve the health of

individuals' bodies – was not discussed in the reader comments, and alternative subject positions, including those of problematised individuals (that is, those who are classified as obese or those from lower socio-economic conditions), were silent in the reader comments.

The righteousness and indignation with which obesity was spoken about in the reader comments implies that obesity results from a *wilful choice*. In order for this position to make sense, it relies on the assumption that knowledge, of which obese people must be in possession, facilitates behaviour change. The decision to act upon knowledge to avert obesity is thereby the key distinction between legitimate and illegitimate subjects. The production of these subjectivities engendered support for punitive policies deployed to make obese people take responsibility and 'teach them a lesson' for not acting upon knowledge about how to avert obesity.

# Article: Emotion in obesity discourse: understanding public attitudes towards regulations for obesity prevention

## Rationale for journal choice

This article was published in *Sociology of Health and Illness*, a leading international journal examining sociologically-informed articles on matters relating to health. Owing to the theoretical orientation of the article, *Sociology of Health and Illness* was an appropriate choice for disseminating findings from this study: public health and policy journals do not tend to publish in-depth theoretical exploration. Feedback I received from reviewers helped me to develop the theoretical arguments presented in the article.

## Statement of authorship

**Title of article:** Emotion in obesity discourse: understanding public attitudes towards regulations for obesity prevention

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Name of principal	Lucy Farrell
author (candidate)	
Contribution to the	Conceptualised study design, undertook data
paper	collection and analysis, conceived of manuscript
F-F-	orientation and structure, reviewed literature, drafted
	and edited the manuscript, and acted as corresponding
	author.
Certification	This paper reports on original research I conducted
	during the period of my Higher Degree by Research
	candidature and is not subject to any obligations or
	contractual agreements with a third party that would
	constrain its inclusion in this thesis. I am the primary
	author of this paper. Contribution = 90%
Signature	Date 22/3/18

## Co-author contributions

By signing the statement of authorship, each author certifies that:

- the candidate's stated contribution to the publication is accurate (as detailed above);
- ii. permission is granted for the candidate in include the publication in the thesis.

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## **Emotion in obesity discourse: understanding public** attitudes towards regulations for obesity prevention

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Abstract Intense concern about obesity in the public imagination and in political, academic and media discourses has catalysed advocacy efforts to implement regulatory measures to reduce the occurrence of obesity in Australia and elsewhere. This article explores public attitudes towards the possible implementation of regulations to address obesity by analysing emotions within popular discourses. Drawing on reader comments attached to obesity-relevant news articles published on Australian news and current affairs websites, we examine how popular anxieties about the 'obesity crisis' and vitriol directed at obese individuals circulate alongside understandings of the appropriate role of government to legitimise regulatory reform to address obesity. Employing Ahmed's theorisation of 'affective economies' and broader literature on emotional cultures, we argue that obesity regulations achieve popular support within affective economies oriented to neoliberal and individualist constructions of obesity. These economies preclude constructions of obesity as a structural problem in popular discourse; instead positioning anti-obesity regulations as a government-endorsed vehicle for discrimination directed at obese people. Findings implicate a new set of ethical challenges for those championing regulatory reform for obesity prevention.

Keywords: Obesity, Health Policy, Regulation, Discourse analysis, Emotions

#### **Background**

Narratives of an 'obesity epidemic' have evoked intense concern in recent decades, with clear links between obesity and non-communicable diseases (WHO 2000) and high associated economic costs (OECD 2010) spurring government efforts to address the issue. In Australia, as elsewhere, these efforts have to date emphasised individual behaviour change through dietary and physical activity guidelines, social marketing campaigns, and school-based programmes (Department of Health 2014a).

The ineffectiveness of such approaches in reducing weight at the population level (Campbell et al. 2001, Flynn et al. 2006, Walls et al. 2011), and a clear socioeconomic gradient for obesity (King et al. 2006), have led to a concerted push amongst public health advocates for regulatory measures addressing obesity. Possibilities include restricting marketing of unhealthy

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foods, mandatory menu labelling, and taxation measures (Beaglehole et al. 2011, Gostin 2004, Swinburn 2008).

Australian governments remain reluctant to introduce regulations for obesity prevention<sup>1</sup> (Chung et al. 2012, Crammond et al. 2013, Loff and Crammond 2010, Swinburn and Wood 2013). Obesity is commonly framed as a matter of 'personal responsibility', resultant from individuals' failure to appropriately assess the risks of their food consumption and physical (in)activity (Henderson et al. 2009, Lupton 2013a, Townend 2009). The framing of obesity as an individual concern fits within a neoliberal political context, typified by concerns with more 'efficient' governance through free markets, deregulation and privatisation (Baum and Fisher 2014, Harvey 2005). Markets are premised on 'rational choice', which serves to normalise the self-interested individual as the primary unit of social and political significance (Harvey 2005). A neoliberal stance thus provides little impetus for governments to acknowledge factors beyond individual causes of obesity. Proposals for regulations to address ecological drivers of obesity are routinely derided as unwarranted 'nanny state' interference into individuals' lives (Baum and Fisher 2014, Loff and Crammond 2010, MacKay 2011, Townend 2009, Walls et al. 2009), despite evidence that complex environmental, sociocultural and economic factors are upstream drivers of obesity prevalence (Dietz et al. 2009, Swinburn 2008, Swinburn et al. 1999).

The role of regulations in addressing obesity is thus contentious. While the threats posed by obesity might be seen to warrant decisive government action, such action might also be seen to restrict individuals' autonomy and liberty. Obesity prevention has been called 'a crucible for debating the appropriate role for government, and for law, in public health generally' (Magnusson 2008), and has become enmeshed with political and ideological arguments about notions of individual autonomy and free markets compared with public health and collective benefit (MacKay 2011). Notwithstanding the importance of these debates in guiding public health practice, regulatory reform to address obesity is most likely to be prompted by public will (Chung et al. 2012, Crammond et al. 2013, Walls et al. 2012). It remains unclear how community anxieties about the 'obesity epidemic' and other popular obesity discourses fit with public understandings of the appropriate role of government in addressing obesity.

#### Theorising the consequences of emotion in obesity discourse for regulation

The substantial power of emotion in shaping discourses of obesity is well-recognised, however as Fraser *et al.* (2010) have argued, this has predominantly been explored from the perspective of a 'moral panic'. Work on the 'moral panic' around obesity (e.g. Campos *et al.* 2006) tends to belittle emotion in obesity discourses as the undesirable alternative to objective and rational (de)constructions of the 'obesity problem'; a division which misleadingly conceives of discourse as conscious, planned and rational (Fraser *et al.* 2010, Lupton 2013b, Wetherell 2012).

Theoretical work on emotion<sup>2</sup> instead attempts to understand social and political phenomena by refusing the distinction between emotion and reason (Thrift 2004, Wetherell 2012). Through their role in evaluating phenomena, emotions are an essential component of values and meanings, and are thus indivisible from individuals' understandings of and interactions with the social and political world (Ahmed 2004, Clarke *et al.* 2006, Wetherell 2012). Failure to acknowledge the role of emotion in analyses of social and political phenomena therefore compromises the explanatory capacity of those analyses and precludes a full understanding of social organisation and power (Barbalet 2006).

This paper looks to the work of Sara Ahmed to examine the role of emotion in obesity discourses. Ahmed (2004) employs the concept of 'affective economies' to describe the © 2015 Foundation for the Sociology of Health & Illness

circulation of emotions and the creation of value. For Ahmed, emotions do not reside within subjects or objects, but rather come to exist in the space between them; working to delineate the boundaries of subjects, and align them with (or exclude them from) collective bodies through an effect she calls 'surfacing'. Ahmed (2010: 29) asks how emotions 'stick' to some subjects and collectivities to sustain 'the connections between ideas, values, and objects' in order to endow them with meaning.

Affective economies and the subjects and collectivities they produce are neither isolated nor ad hoc, but rather intersect with broader cultural values and social structuration to sustain affective connections between objects, subjects and collectivities. By explicating patterns in emotions, it is possible to illuminate how individuals appear to be reacting to problems and situations, consistent with the dominant 'emotional culture' (Clarke et al. 2006, Williams 1977), in which some emotions are usual while other affective possibilities become exceptional or apparently impossible (Wetherell 2012). Affective economies operating in obesity discourses reflect and (re)produce these 'emotional cultures' that enable certain ways of thinking and feeling about using regulations to address obesity to be made powerful, dominant and therefore 'legitimate'. Other ways of thinking about possible solutions are contrary to the 'cultural politics' and are therefore deemed unacceptable.

This analytical approach is concerned with how emotion in obesity discourses functions to shape individual and collective bodies through processes of social abjection<sup>3</sup> (Tyler 2013) operating to constitute obesity as a site for government intervention. For Tyler, social abjection is a process of inclusion and exclusion through which caricatured and fetishised 'waste populations' are produced as threatening the common good of the body politic, thereby demanding rigorous governance and monitoring by all sectors of society. These 'wasted populations' become 'national abjects', employed to legitimise neoliberal forms of governmentality by effecting insecurity within the governmentally-normative body politic. In what follows, we explore how public support for obesity regulations is produced through culturally supported affective economies operating to produce obese people as 'national abjects'; thereby precluding alternative interpretations of – and solutions to – the 'obesity problem'.

#### The action of emotions in the moralisation of obesity

The framing of obesity as a matter of individual responsibility resultant from poor lifestyle is part of a broader narrative in which obesity ensues from a lack of self-discipline, and thus a moral failure to maintain a 'normal' body size (Coveney 2000, Holland *et al.* 2011, Lupton 2013a, 2013b, Saguy and Almeling 2008). These representations frame obesity as a problem caused by lazy individuals' excessive and greedy consumption of the 'wrong' food (De Brún *et al.* 2014, Holland *et al.* 2011). This framing reflects the metonymic relationship between obesity and 'sticky' qualities that have come to underscore the moral inferiority of obese bodies, including laziness, permissiveness and irresponsibility. Emotions such as fear, disgust, contempt and anger (De Brún *et al.* 2014, Fraser *et al.* 2010, Lupton 2013a, 2013b, 2015) invoked by these qualities operate to secure the bounds of the governmentally-normative citizenry by surfacing it as *not* lazy, permissive and irresponsible, and simultaneously produce obesity as abject, as if abjection were a material and objective quality of obese bodies (Ahmed 2004, Skeggs 2011, Tyler 2006).

Emotions thus operate to constitute obese bodies as abject and value-less, while slim, 'disciplined' bodies accumulate value produced in this process. The collectivities produced through emotions expressed about obesity are fundamentally demarcated by moral transgressions, including laziness, permissiveness and irresponsibility, that are 'stuck' to the obese figure. This moralisation enables grievances with obesity to be articulated as a principled position; legitimating the grievance and intensifying the distance between the virtuous Self and obese Other.

The role of emotion in configuring obesity as a risk

Intersecting with this moralisation is the framing of obesity as an imminent public health crisis through language of an 'obesity epidemic' and the consequent 'war on obesity' (Boero 2007, Holland *et al.* 2011, Saguy and Almeling 2008, Saguy and Gruys 2010). The widespread tendency to conflate 'overweight' and 'obesity' serves to increase the apparent magnitude of the 'obesity problem' and heighten anxieties about the threats posed (Campos *et al.* 2006, Lupton 2013a, Holland *et al.* 2011). Additionally, obesity is routinely conflated with the diseases for which it is a risk factor; serving to construct obese bodies as a symbol of disease and future harm and therefore as 'risky' (Evans 2010, McNaughton 2013).

Childhood obesity in particular invites intense concern about the threat of future harm; heralding unknown and therefore potentially unmanageable levels of disease and economic catastrophe (Coveney 2000, Evans 2010). Anxieties about children's health and wellbeing reflect the social value of children, whose vulnerability and blamelessness is commonly juxtaposed against villains threatening their lives and safety (see Searle 2003). In expert, media and popular discourses, obese children are constructed as victims to parental, and specifically maternal, ignorance, irresponsibility, and over-indulgence; denying children of proper childhood comportment, and thereby denying them of the childhood to which they are entitled (Evans 2010, Henderson *et al.* 2009, Lupton 2013a, Maher *et al.* 2010a, 2010b, Searle 2003, Warin *et al.* 2012, Zivkovic *et al.* 2010). These discourses deride mothers for their failure to constrain their children's weight, and by extension, to contain the risks posed to the future wellbeing of the nation (Evans 2010, Lupton 2013a).

Emotions prevalent in obesity discourse configure obesity as a target for immediate government intervention. Lupton (2013b) offers the concept of the emotion-risk assemblage to emphasise the dialectical configuration of risks and emotions; fear and anxieties about obesity configure it as a risk, which thereby serves to incite fear about obesity. It is this perception of obesity as a risk that compels decisive pre-emptive government action to quash the dangers posed, as the fear felt in response to the threats understood to be posed by obesity allows projection into future calamitous scenarios (Lupton 2013b, Massumi 2010).

#### The study

Reader comments on 'comment boards' attached to obesity-relevant articles published on Australian news and current affairs websites were analysed for the presence of emotion in discourses about obesity regulations. Comment boards attached to online articles are a realm of social interaction offering a window into public discourse. As such, reader comments have been identified by both Atanasova *et al.* (2012) and Boero (2013) as an important area for obesity research. Comment boards can engender highly emotive discussion about obesity (De Brún *et al.* 2014), and are therefore an opportune medium through which to observe public emotions around obesity prevention regulations.

#### Data

Data for the study were drawn from 14 Australian online news and current affairs websites, chosen to reflect diversity in ownership<sup>4</sup> (commercial, public or independent) and geographical location (each state/territory, and national sources). This facilitated analysis of politically diverse public discussion about a broad range of obesity regulations proposed or implemented across all Australian legislative jurisdictions (federal and state/territory levels).

Articles were identified via Factiva using search terms related to obesity and obesity prevention in the headline from 1 January 2013 to 31 December 2013. Articles meeting inclusion © 2015 Foundation for the Sociology of Health & Illness

criteria were located in original format on news and current affairs websites, with those with one or more reader comments retained for analysis. The sample comprised 3,636 reader comments attached to 83 news stories, averaging 44 comments per article. Search terms, sources and inclusion/exclusion criteria are summarised in Table 1.

#### Analytic process

Analysis involved preliminary coding of comments, using NVivo 10 software (QSR International, Melbourne), to identify major themes in the discussion of obesity regulations. Through close reading, recurring arguments and accounts were identified. News articles were read to contextualise comments. The analysis asked: How do readers represent the 'problem' of obesity? What Othering takes place? What causes of and solutions to obesity are proposed? Is government regulation encouraged or rejected?

This level of analysis formed the basis for an interpretive affective-discursive analysis, for which themes from the preliminary coding were analysed for the presence of emotion (Ahmed 2004, Wetherell 2012). This involved coding for overt pronouncements of emotion through declarative statements ('That makes me so mad!'), caps lock, exclamation marks and other emphatic declarations, and use of obligatory language (ought, should, must). The latent emotive content of the comments was also coded; manifest through evaluative accounts of the articles to which the comments were attached and other commenter's accounts (Wetherell 2012), and through metonymy and metaphor (Ahmed 2004). The analysis was concerned with identifying how emotion 'sticks' to certain objects and ideas, as well as how it 'surfaces' the bound-

Table 1 Search strategy

Database	Dow Jones Factiva
Search terms	obesity OR obese OR overweight OR (fat NOT cat*) OR 'fast food' OR 'junk food' OR 'big food' OR 'soft drink' OR 'sugar sweetened beverage' OR 'sugary drinks' OR 'big soda' OR 'soda tax' OR 'soft drink tax' OR 'soda ban' OR 'sugar tax' OR 'fat tax' OR 'food label*' OR 'nutrition* label*' OR 'food rating' OR 'food regul*' OR ('star rating' AND food) OR 'kilojoule label*' OR 'calorie label*' OR 'food advertising' OR 'food ads' OR 'food marketing'
Date range	1/1/2013 to 31/12/2013
Sources	The Australian – All sources, Sydney Morning Herald, Daily Telegraph (Australia) – All sources, The Age (Melbourne, Australia), The Age, Herald-Sun, Courier Mail – All sources, The West Australian, The Advertiser, adelaidenow.com.au, Northern Territory News/Sunday Territorian, Hobart Mercury, news.com.au, The Conversation, NineMSN, Australian Broadcasting Corporation (ABC) News
Search in	Headline
Inclusion criteria	Major focus of article on human obesity
	Original version of article able to be located on news outlet website At least one reader comment attached to article
Exclusion criteria	Duplicate newswire or syndicated stories, except where comments differed between news outlets  Articles focusing on diet, weight loss or nutrition not in the context of obesity Articles focusing on obesity research conducted on animals  Articles not meeting inclusion criteria

aries of collective bodies and creates distance between them (Ahmed 2004) in order to support or reject regulations.

#### Strengths and limitations

Analysis of reader comments enables novel insights to be generated into public views about the use of regulations for obesity prevention. The anonymity afforded by the online environment encourages deindividualisation and disinhibition, which although acknowledged to lead to higher levels of hostility and aggression than might occur in other forums, also enables opinions to be expressed that may not be expressed elsewhere (Suler 2004). The approach therefore enables unique insights into the consequences of stigma and negative beliefs prevalent in obesity discourses for the implementation of obesity regulations. This may not have been apparent in a researcher-led setting due to the impact of social desirability, moral correctness, and the imbalances of power that can accompany embodied presences in obesity research (De Brún et al. 2014, Gunson et al. 2014, Warin and Gunson 2013).

However, the limitations of the approach must also be acknowledged. The number of commenters on any given article is limited and often composed of regular contributors; the demographic characteristics of commenters cannot be ascertained; not all articles are open to comments; and articles are subject to moderation<sup>5</sup> (Atanasova *et al.* 2012). Reader comments cannot therefore be regarded as representative of broader public opinions about obesity regulations. Consequently, the ability to generalise these results is limited and the extent to which these discourses are replicated in other forums of social interaction is a question worthy of future research.

#### Ethical considerations

As a relatively novel site for social research, the internet presents new ethical considerations for researchers. Continually changing technologies and cultural contexts of internet use defy attempts to pre-define what might constitute harmful research practice, and mean that major considerations in research ethics such as anonymity and informed consent must be considered in terms of the specific research context (AoIR 2012). We have considered the guidelines developed by the Association of Internet Research (2012) to inform our stance on these matters in this study.

Whether online communications constitute private or public behaviour is key to the issue of informed consent (AoIR 2012). Kraut *et al.* (2004: 110) have suggested that internet research does not require the knowledge or consent of subjects because individuals who post on publically accessible websites have 'no reasonable expectation of privacy'. While we do not ascribe to this viewpoint as a general position, in view of the overtly public nature of commentary on news and current affairs websites we endorsed it in this instance.

Anonymity in this study reflects the level of anonymity exhibited on the comment boards. For some websites, posts were made anonymously through use of an alias, while for others anonymous posting was not allowed. The decision to not take additional steps to ensure the anonymity of those commenting hinges on the importance of preventing distortion of the dataset. Paraphrasing or composite quotes could not replicate the emotive content of the comments, so comments are presented in the *Findings* verbatim with all errors and textual devices in place. Use of pseudonyms or concealment of publication characteristics would thus not prevent the identity of commenters being revealed via a search engine.

We acknowledge that our stance on these issues is contestable. However, we contend that the risk of harm to individuals due to inclusion of comments in this study is not substantively increased beyond that originally posed by participation in the online discussions.

#### **Findings**

Emotions expressed about anti-obesity regulations coalesced around several central and interrelated themes, illuminating the construction of anti-obesity regulations in popular discourse and, in particular, the values attached to those aspects of social life potentially impacted by the regulations. Here, we focus on the demise of social values, a sense of unfairness, and distrust of obese individuals and governments, as it was around these themes that emotion was strongest.

#### Social decay

Emotions expressed on the comment boards revealed a widely held belief in the moral degradation of social norms, which worked to constitute obesity as a target for government regulation. A perceived generational shift towards 'improper' management of diet and physical activity affectively produced a sense of righteous fury; connecting obese bodies with dwindling morality and presenting obesity as a ubiquitous threat posed by younger generations:

BACK IN THE 1950'S GLUTONY AND LAZINESS WERE STILL CONSIDERED TO BE A SIN AND A MORAL FAILING. NOW IT IS MAIN STREAM AND ACCEPTABLE TO EAT LIKE A PIG AND SIT AROUND IDLE. LETS FACE IT. WE MUST RETURN TO THOSE OLD VALUES FOR OUR OWN SAKE AND THAT OF OUR KIDS IF WE WISH TO LIVE HEALTH AND FULFILLED LIVES. (Suzy of Darwin, NT News)

As this passage demonstrates, childhood obesity was emblematic of the demise of social values. Rage in these accounts constituted obese children as a threat; left unmitigated through the moral failings of their parents.

Overwhelmingly in our sample, childhood obesity was 'stuck' to the degradation of women's (mothers') roles since the 1950s. Representations of 'parental' responsibility for childhood obesity were code for 'maternal' responsibility in our sample (see Warin et al. 2012, Zivkovic et al. 2010). The (im)proper mother (Pocock 2003) subject was evoked through contempt and anger, and was situated within a 'longer history of articulation' (Ahmed 2004: 1) in which mothers have a gendered responsibility to provide appropriately nutritious food and care for their families; precluding other possibilities for the role of mothers. The circulation of nostalgic sadness around the normative shift to working parents (mothers) saw working mothers lambasted for being lazy and selfish, and for facilitating childhood obesity through their engagement in paid work. These emotions produced the 'working mother' as useless, lacking, and beyond the constitutive limit to proper personhood (Skeggs 2011); serving to accrue value on the maternal figure engaged in home duties:

Helen, thank you for the example of Jack and Kylie, abandoned by their full-time working parents, who are too tired to raise their children with the attention and energy that is so much required (Andy Cameron, The Conversation)

I agree. The modern notion of two parents working and the kids are fine is a bit silly. I am worried that we are a few years away from the true consequences of this type of thinking. My mother was forced, through necessity, into the work force back in the 60's. The family no longer exists, it was a complete disaster, and it's because she was too tired and stressed to be a mother (Janeen Harris, The Conversation)

Emotions positioning deteriorating maternal values as the central cause of childhood obesity worked to bring alternate explanations for rising obesity rates into the discourse of 'maternal responsibility'. The proliferation of processed and fast foods – also constructed as a symbol of social decay – was also caused by 'lazy' working mothers, whose reliance on such foods was 'stuck' to their workforce engagement: 'improper foods' provided by 'improper mothers':

No one said parenting is a piece of cake (as it were) but parents should take charge, accept their fatigue which is also a normal part of parenting, and deal with their kids. Dont blame fast food outlets which have just proliferated because of a generation of lazy people who dont cook. (Lazy, The Age)

The assemblage of obesity, children, and irresponsible mothering evoked anger directed at mothers; working to attach value to those demonstrating proper personhood by averting obesity themselves and for their children. Into this, regulation was configured as a solution, with readers lamenting as necessary government intervention to regulate those unable (unwilling) to self-regulate. Addressing the emblems of social decay (childhood obesity and abundant fast food) was nominated as the obvious starting point for governments, with restrictions on TV advertising to children widely advocated. Although responsibility for the escalating occurrence of obesity remained with parents (mothers), the magnitude of the challenge was seen to warrant collective action:

I believe the obesity 'epidemic' or whatever you like to call it – requires a huge shift throughout our way of living. Certainly ridding the television of fast-food/sugar drinks 'give-away' advertising would help ... Little children don't make conscious decisions about what to eat – what not to eat – they are fed by parents and/or they are watching all the time what their parents are doing/eating/drinking/smoking. (Tokujiro, Sydney Morning Herald)

#### (Un)fairness

Emotions circulating around notions of fairness emerged as a key feature of how the obese 'Other' was surfaced and made abject. Some claims of fairness positioned obese people as responsible for instigating regulations, and therefore for unfairly curtailing the liberties of others who appropriately manage their bodies. Alternatively, regulations were seen as a way of holding obese people to account for their weight.

Claims of unfairness were evoked through accounts teeming with resentment and indignation towards obese individuals because of their failure to make 'responsible' choices. The obese Other constituted in these accounts was lazy, unintelligent, and in wilful defiance of accepted rules of bodily management. The 'healthy' self was delineated from this Other through self-denial and the reasonable and rational management of risks, and was part of a moral discourse through which the values distinguishing the Self from the Other were reaffirmed (Crawford 1994). Anger, contempt and disbelief directed at obese people cemented the boundaries between the Self and those representing transgressed boundaries, and thereby enabled the identity of the Self to be secured (Ahmed 1994, Crawford 1994).

Some regulatory approaches placing obese and non-obese bodies under the same regulatory gaze were seen to remove the tools through which the Self delineates itself from the Other. In these accounts, the Other was presented as responsible for the potential revocation of properly managed hedonistic freedoms enjoyed by those appropriately regulating their bodies. The Self © 2015 Foundation for the Sociology of Health & Illness

invoked in these accounts was treated unfavourably by governments, as an assault against their self-regulatory efforts:

I go to the gym several times a week and do my best to eat healthy. I also like to reward myself with a cheeseburger or a packet of chips every now and then. I'm fit and healthy, so why should I have to look at disgusting images<sup>6</sup> that ruin my appetite? Introduce a tax on bad food and discount healthier options. I just don't want to look at images similar to what appears on a cigarette packet when I'm trying to enjoy my treat (Corban of Coorparoo, Courier Mail)

This sense of unfairness was compounded by concerns that resentment of obese individuals could not be voiced for fear of being labelled 'politically incorrect'. This amplified resentment towards obese people and 'politically correct' governments. The circulation of emotion around a perceived social imperative to be outwardly sensitive to obese people constructed obesity regulations as an outlet for this resentment. Regulations were seen as a state-sanctioned vehicle through which to discriminate against obese people. Moral righteousness and shame saw strong parallels drawn to Australian smoking regulations:

Time to Super Tax junk food, proportionally to how unhealthy it is, so that it substantially over-covers the cost of obesity on the public health system. Seems to be working for smoking. (Randy, Sydney Morning Herald)

I couldn't agree more! As an ex smoker, the anti smoking campaign increased the guilt for smoking unbelievably. People felt they could comment openly to my face about the 'filthy habit'. People would say 'oh ... you're a smoker?' Nup. Not any more. Perhaps that is what it takes to make people eat less, or eat differently. Separate eating areas for obese people, like the separate smoking areas? Ban eating outdoors, so that thin people aren't offended by fat people eating in public places? Council by laws could impose fines? Do we all start making rude comments to fat people eating in front of us, to shame them to stop their 'filthy habit'? Seems to me, what's good for the goose is good for the gander (Jen jen, Sydney Morning Herald)

I agree @Jen jen. Naming, blaming & shaming has worked to reduce smoking why cant the same work with obesity? (King, Sydney Morning Herald)

#### Distrust

Distrust emerged as a key obstacle to popular support for obesity prevention regulations, with emotions strongly articulated in relation to both obese people and governments. Obese people were constructed as conniving, deceptive, and unable to be trusted to look after themselves:

This will only end up like cigarettes and alcohol, people who want to eat bad food will seek it out and buy it, if that means that they eat no more healthy foods anymore because their spending all their money on the bad foods. (James of Alice Springs, NT News)

Affective economies operating around notions of trust were centrally concerned with the medicalisation of obesity. Some obese bodies were presented as more shameful than others, with

the cause of obesity – described throughout our sample as binary opposites: medical (including genetic) factors, or choice – attributing different value to different obese bodies. Sadness and empathy were expressed for those whose obesity stemmed from 'legitimate' medical causes:

I am disheartened by the insistence by some commentators that being fat is a choice, as to do so completely ignores a great body of evidence which suggests that there are a number of medical conditions and medication side effects which play a significant role in weight gain. I am not suggesting that because a person has one of those conditions that they should use that as an excuse, but to suggest that discrimination against them is acceptable because they are fat, is the same as saying that that discrimination is acceptable because they have a medical condition. (Phoebe Ledford, The Conversation)

In such narratives, empathy was enacted through assemblages formed around obesity, choice, and disease. The medicalisation of obesity allowed moral failure to 'slide' from these obese bodies; constituting them as victims by shifting the locus of control beyond the individual. The affective tone therefore shifted from one which delineates the morally inferior subject made obese by choice, to one of compassion for those who were seen to have committed no moral wrongdoing.

However, with the ability to determine one's future a central feature of contemporary neoliberal citizenship, empathy for those with medical or genetic predispositions to obesity was only possible in the context of obesity causation. Anger and frustration were directed at obese people seen to employ medical factors as an excuse for failing the moral imperative to invest in their future selves:

Medical problems such as thyroid conditions and poly cystic ovary syndrome can cause weight loss to be difficult but not unacheivable. Metabolism is not something that can't be changed there are ways to speed yours up. Stop making excuses and work hard. It's a simple idea eat less move more. (Olivia, Courier Mail)

Because emotions circulating around binary notions of obesity causation precluded consideration of more nuanced explanations for obesity, articles or comments drawing attention to the role of structural factors in causing obesity were fiercely attacked as evidence of attempts by obese people to absolve responsibility:

[T]he fact is, you get fat because you eat too much of the wrong food and don't exercise enough. Advertising doesn't make you fat. Living in a lower SES community doesn't make you fat. Taking the kids to football doesn't make you fat. Even eating take away food doesn't make you fat - unless you eat too much of it. You get fat because of what you put in your mouth. Full stop. (Mike Swinbourne, The Conversation)

Distrust of obese people was central to support expressed for obesity prevention regulations. In particular, frustration was voiced about the Health Star Rating system<sup>7</sup> (HSR), with the effectiveness of this measure in reducing obesity understood to be contingent upon trusting obese people to make healthy choices:

I see this as a waste of effort. Has anybody watched how most people shop in a supermarket? They do not even read ingredients. They do not care! They expect the Doctor to fix them after they have filled their bodies for many years with excess fat, sugar and salt. Peo-

ple who care what they put into their bodies will not buy processed foods. (Rosie Hayes, The Conversation)

Many comments expressed frustration towards untrustworthy governments, primarily in relation to conflicting and inconsistent messages about healthy eating. As Ward *et al.* (2011) also observed, blame was laid with the scientific community for changing ideas about 'truth'; leading to confusion about what constitutes 'healthy food'. In our study, these feelings of confusion were expressed along with a more strongly articulated sense of cynicism and frustration directed at governments for the perceived unreliability of official dietary guidelines. Distrust in governments was expressed in relation to the HSR system, and whether it was based on sound nutrition principles:

The problem is that there's no question over what constitutes a tobacco product, but there is debate over what constitutes 'junk food'. My definition is anything which contains food additives or processed oils, but any scheme like this is more likely to be based on standard dietitians' definitions, which focus more on fat, salt and sugar content and ignore the basic question of whether a product is food or not. When the official advice still recommends eating margarine over butter, I don't think our health 'experts' can be trusted to design this scheme. (Jen, Courier Mail)

Government distrust was also articulated through a sense that, because of 'political correctness', governments lack the fortitude to address obesity through measures likely to be effective. Regulations addressing discrete aspects of the food or physical activity environments, such as the HSR system, were tendered as evidence of government frivolity. Exasperation in these accounts was centrally concerned with governments' role as economic caretakers; aligning together those who face 'disadvantage' through public funds being directed towards management of obesity-related ill health, and constituting obese people as a common threat to the economic prosperity of the nation:

\$56 Billion cost to the community per year because of obesity? Then the Federal and State government need to have the courage to heavily tax body weight ... Very heavily tax it in all manner of ways. None of this gibberish about rights of the individual to be gluttonous. It costs the community a fortune. The issue is whether we have politicians of conviction or not. People who are prepared to call a spade a spade and actually govern. I doubt we have. (Malcolm, Sydney Morning Herald)

#### Implications and conclusion

Emotions expressed about obesity prevention regulations fit within affective economies oriented to neoliberal individualist constructions of obesity. Righteous anger and frustration expressed about obesity constructed obese individuals (and mothers of obese children) as wilfully defiant of their responsibilities for proper comportment and containment. These emotions operated to define the constitutive limits of proper personhood, by 'surfacing' obese people as unable to be trusted to appropriately manage their bodies (and those they care for), in binary opposition to virtuous self-regulatory non-obese citizens.

Affective economies operating around obesity worked to constitute obese bodies as irresponsible, lazy and abject; having failed the moral imperative to invest in their own future wellbe-

ing and, by extension, the future wellbeing of the nation. The governmentally-normative subject constituted through this boundary-marking accrued value because of its future investment, but remained threatened by the negative (social and economic) value of obesity. Support for obesity regulations was thus generated through public fears and anxieties channelled towards obese 'national abjects' (Tyler 2013), imagined as a threat to scarce national resources.

Regulatory measures were seen as a means of imposing standards of bodily management upon those perceived to be unwilling to self-regulate. The regulatory approaches most strongly endorsed were those understood to remove responsibility and choice from obese individuals, and work to hold obese individuals culpable for their obesity, their irresponsible choices, and the economic burden they impose. Conversely, regulatory measures addressing discrete aspects of the food or physical activity environments and those seeking to facilitate healthier choices rather than restricting choice were considered unlikely to be effective in reducing obesity and therefore garnered little support. These findings are problematic for those advocating an incremental approach to the introduction of obesity prevention regulations, as the approaches most strongly supported in public discourses are those most likely to have a negative economic impact on the food industry.

Social marketing campaigns addressing obesity have been criticised for their capacity to perpetuate weight-based stigma and reinforce negative attitudes towards those who are already marginalised and disadvantaged (Lupton 2015, Walls *et al.* 2011). Our findings indicate that these problems are not alleviated by adopting a regulatory approach to obesity prevention. Regulatory approaches, too, position obesity as abject, disgusting and irresponsible. In a similar fashion to that seen in social marketing campaigns (Lupton 2015), obesity regulations are underpinned in public discourse by moral judgements about comportment and containment that arouse anger, frustration and contempt. It is possible, however, that regulatory action to address obesity may be accompanied by a reduction in weight-based stigma and discrimination in time, if the public health rationale for those measures is brought into public discourse.

With regulatory measures framed as a means for holding obese people to account, emotions expressed about regulations operate to emphasise the distinctions between those who appropriately manage their bodies and those who do not. The affective economies at play thus preclude understandings of obesity as a structural problem in popular discourse. Instead, they position efforts to implement regulations as evidence of governments taking a more uncompromising approach to obesity prevention, and therefore may act as endorsement for discrimination directed at obese people. These findings contradict intimations in the public health literature that adopting regulations to address the structural drivers of obesity will shift attributions of responsibility for obesity away from individuals.

Our research has traced the ways in which emotions attached to obesity and notions of individual versus collective responsibility are implicated in public debates about the appropriate role of government in managing the 'obesity crisis'. The failure of education-oriented approaches to bring about substantive reductions in obesity prevalence is seen by public health advocates to warrant regulatory reform to address structural drivers of obesity. We have demonstrated that the shifting focus from education to regulation is enmeshed with neoliberal affective economies circulating in popular obesity discourses. These economies operate to reinforce public demand for some regulatory approaches, while bringing about a new set of ethical challenges for those championing regulatory reform for obesity prevention. How best to balance the imperative to maximise population health within a social context that positions obesity regulations as inducement for weight-based discrimination is a question worthy of further research attention.

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#### **Notes**

- 1 Several government reports including the 2008 Parliamentary Inquiry into Obesity and the 2009 National Preventative Health Strategy have recommended multi-sector systematic obesity prevention strategies, including regulatory approaches. While some community-based measures that are explicitly socio-ecological in nature have been implemented with the support of the Council of Australian Governments (for example, Opal in South Australia and Healthy Together in Victoria), education-based approaches predominate as the preferred approach to address obesity at a whole-of-population level. Politicians from both major federal political parties continue to espouse education rather than regulation as the preferred approach to obesity prevention (Henderson et al. 2009, Swinburn and Wood 2013).
- 2 Following Ahmed (2004), we use *emotion* to focus our analysis on the sociality of feelings, elsewhere referred to as *affect* (see Ahmed 2014, Wetherell 2012 for a critique of these terms).
- 3 Tyler (2013: 13) does acknowledge the different theoretical interpretations of abjection, and in doing so states that she is an 'unfaithful reader of Kristeva'. Her concept of social abjection thus does not engage with the workings of desire, which Kristeva posits as central to the 'powers of horror' (Kristeva 1982).
- 4 Media ownership in Australia is highly centralised. The inclusion of public and independent not-for-profit news and current affairs sources (ABC and The Conversation) seeks to diversify the political viewpoints expressed in articles and attached comments, while remaining attentive to the media land-scape as it is experienced by the Australian public.
- 5 Sources included in this study employ a combination of pre-moderation (comments submitted for publication are screened by a moderator prior to posting) and post-moderation (all comments submitted are posted, with posts deemed offensive, off topic, or spam removed by a moderator. For some sources, comments must be 'flagged' for removal by a reader).
- 6 Reference to 'plain packaging' of cigarettes in Australia as a suggested approach to obesity prevention. Cigarette plain packaging can be viewed at: http://www.yourhealth.gov.au/internet/yourhealth/publishing.nsf/content/tppbook#.U7oPGZSSySo
- 7 The HSR appears on the front of packaged foods to highlight 'healthiness' with a scale of '½ a star' to '5 stars'. Following negotiations between government, public health, and food industry representatives, the implementation of the HSR system on an initially voluntary basis was signed off on 27 June 2014 (Department of Health 2014b).

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# **Chapter Five**

# Obesity regulations and the classed spatialities of ignorance

In this chapter, I explore how moral views about the role of regulations in addressing obesity relate to social power structures. Regulations are widely touted as a means to redress obesity-related health inequities between advantaged and disadvantaged groups. Arguments about the role of regulations in achieving this objective deploy the concept of an 'obesogenic environment' (Egger & Swinburn, 1997) to explain how ecological factors differentially constrain individuals' ability to live healthful lives. As described in Chapter One, such explanations are often presented as a counter-balance to explanations focussed on behavioural risk factors, which have been criticised for moralising obesity by blaming it on poor individual choices.

The published article presented in this chapter explores the views of those living in advantaged and disadvantaged areas – differentially problematised in relation to the obesogenic environment thesis – about the use of preventive obesity regulations. Findings demonstrate that support for preventive obesity regulations is starkly divided along socio-economic lines. My analysis unfolds in several points. First, I describe how knowledge about nutrition is a key means through which middle class prestige is established in the dominant neoliberal/healthist cultural context. As such, ignorance about obesity is attributed to those in lower social strata to explain the social patterning of obesity. I explain how preventive obesity regulations are conceptualised as a means to pedagogize about the ways of living that are deemed acceptable; drawing on middle class values to instruct those who

are perceived to be ignorant of the causes and risks of obesity. Finally, I demonstrate that those experiencing socio-economic disadvantage overwhelmingly rejected regulations, often due to the perception that such measures are punitive and are likely to compound the everyday adversities of disadvantage. These findings conflict with public health discourse, which tends to position regulations as compassionate and emancipatory through their role in protecting the health of those from lower socio-economic conditions.

The study illuminates how many preventive obesity regulations that have received political attention in Australia, such as taxes on soft drinks or unhealthy foods, exemplify 'problem closure' (Guthman, 2013). Through their embeddedness in middle class norms, attention to these proposed regulations precludes a more complete interrogation of the conditions driving the social patterning of obesity. This may ultimately curb the ability of these measures to achieve anticipated outcomes, and may deleteriously impact on the wellbeing of disadvantaged populations; maintaining social hierarchies by perpetuating dominant discourses and their effects. I therefore argue for targeted and reciprocal engagement with those population groups that are problematised in relation to obesity, in order to generate more complete understandings of the reasons for resistance to preventive obesity regulations, and to identify more acceptable interventions to redress health inequalities. By this, I mean that engagement with low socio-economic groups to define the *problem* to be addressed through policy – rather than to generate support for defined regulatory solutions - may offer a more fruitful pathway for interventions to meet the needs, desires, and abilities of those they seek to help.

The section below introduces the published article by describing how it contributes to existing critical scholarship examining the interface of health, social class, and socio-ecological explanations for obesity.

### Obesogenic environments as moralised spaces

Some critical scholars have rejected obesogenic environment accounts for identifying particular population groups and their locations as more or less risky, and for thereby contributing to a moralised spatiality of fatness (Colls & Evans, 2009, 2014). Critical geographers of obesity/fat have described the assumption implicit in socio-ecological explanations that people residing in disadvantaged areas are more likely to be obese because they can afford to eat only cheap food (Colls & Evans, 2009; Guthman, 2011, 2012; Guthman & DuPuis, 2006; Rawlins, 2009; Shannon, 2014). This suggests that it is really constrained individual choices that are the cause of obesity, and that mediating these 'health depriving' conditions will engender healthy choices (Guthman, 2011, 2013).

Kirkland (2011) has admonished environmentally-oriented obesity interventions for their contradictory and problematic invocations of choice. Approaches such as taxes, agricultural subsidies, new bicycle paths, and walking trails are underpinned by a collectivist logic that acknowledges that bodies and the environment constitute an interrelationship. However, these types of interventions ultimately rely on personal responsibility because people must choose to use them. As such, she argues that the aim of the environmental approach is 'to get the poor and the fat to make virtuous personal choices to combat a contaminated world' (Kirkland, 2011, 467).

Efforts to redress inequalities in health through the application of a socioecological lens tend to draw on assumptions about behaviour in disadvantaged
areas that are deeply rooted in middle class norms (Guthman, 2011, 2013; Kirkland,
2011). For instance, Van Dyck and colleagues (2011, 973) examined how 'graffiti,
unmaintained green spaces and illegal posters' may increase the propensity for
obesity in low income areas, as they may make the environment unattractive for
physical activity and may incite fear. This argument is clearly grounded in classed
aesthetics, and does not acknowledge that these environmental features may not
be identified as objects of fear in alternative cultural settings (Colls & Evans, 2014).

Critical geographical research has described how areas characterised as 'unhealthy' are often those associated with particular racial or ethnic groups (Colls & Evans, 2014). As such, the concept of obesogenic environments can operate to mobilise feelings of disgust and blame around particular population groups that are most likely to experience socio-economic disadvantage. For instance, Māori and Pacifika people in New Zealand are constituted as being at greater risk of obesity because of their 'inappropriate' cultural practices and values around eating and exercise (Burrows, 2009). This framing, in concert with dominant individual responsibility obesity discourse and the imperatives of healthism, operates to direct blame for the moral and economic burdens of obesity to these groups. Similarly, Azzarito (2009) describes how obesity interventions aimed at improving the health status of poor minority populations leave invisible the assumption that white middle-class body sizes and shapes are the norm. She argues that obesity interventions targeting minority population groups draw on historically white middle-class values of fat-phobia and dieting, and thereby deny non-white people the prerogative to engage in alternative and more culturally relevant body knowledges.

As well as the social harms of stigmatising marginalised and vulnerable groups due to their poor health status, perverse unintended health consequences may result from defining health (risks) from positions of power. For example, people may assert themselves as competent moral agents by refusing health promotion or medical regimens, in the face of disease prevention language that infantalises and insults them for their failure to maintain good health (Broom, 2008; Broom & Whittaker, 2004). Defining health risks and implementing preventive health interventions from positions of power, albeit with good intentions, may thereby result in unacceptable social and health costs for those groups defined as 'risky' (Broom, 2008).

It is therefore necessary to critically consider how the narratives that underpin public health interventions reflect and reinforce dominant power structures. In the analysis presented in this chapter, I draw attention to classed beliefs about: what behaviours are implicated in obesity; the types of regulations considered likely to change these behaviours; who is considered to be engaging in these behaviours; and why such behaviour change is considered necessary. In doing so, I reveal how the institution of public health is positioned as a pedagogue, forming a conduit through which middle class knowledges about food, bodies and health are privileged and disseminated. The corollary of this is the establishment of a power relationship in which those of low socio-economic circumstances are subjectivised as 'ignorant', and are thus brought forth for instruction.

# Classed knowledges and food practices

Given the policy attention to obesity as it relates to place, it is surprising that there has to date been limited engagement in the mainstream public health literature

with the body of critical social research examining the interface of food, place, and social class. Central to this is Bourdieu's (1984, 1986) work, which concerns the ways in which the different social, cultural, and material forms of capital available to individuals shape the ways in which the world is viewed from different social positions, by encouraging particular attitudes, morals, and expectations.

In his study of social class in France, Bourdieu (1984) argued that food is part of an elaborate performance of identity, rather than simply a form of sustenance. People from working class backgrounds were more likely to see food as a means of fuel, while those from the upper classes distinguished themselves through their preferences for foods that are 'light', 'refined' and 'delicate' (Bourdieu, 1984, 185). Bourdieu related the taste for lighter foods to the 'material conditions of existence defined by distance from necessity, by the freedoms or facilities stemming from the possession of capital' (Bourdieu, 1984, 177). The result of individuals' different experiences and constellations of capital is a class rationality or logic that underpins the ways in which the world comes to be known by those in different social classes.

These classed ways of knowing are highlighted through studies examining place and food practices, which demonstrate that people from different social backgrounds shop differently, eat differently and have different food belief systems (e.g. Backett-Milburn *et al.*, 2010; Coveney, 2005; Curtis *et al.*, 2010; Wills *et al.*, 2008; Wills *et al.*, 2011). For instance, Wills and colleagues (2011) found that middle class families in their study ate a broad variety of culturally diverse foods at home. This served to increase their Otherness from working class families who preferred 'plain' foods, and did not access other cultures through travel or eating out. Working class families' disinterest in eating more 'cosmopolitan' foods

(irrespective of cost) was explained by the instantaneous function of eating in their worldview. This contrasted with the importance of 'the future' for middle class families, for whom food and eating was part of a nutrition discourse and an investment in their children's future social capital.

Classed differences in food practices are important considerations for public health obesity regulations. Cost and taste, not a lack of knowledge or proximity to easily available food options, have been found to be the strongest influences on food consumption in low income areas (Alkon *et al.*, 2013), and people living in low income areas have been found to possess substantial knowledge about healthy eating (Huisken *et al.*, 2016; Warin, 2017). However, in the face of hardship, people may choose momentary pleasures in the form of foods that counter health promotion imperatives as a rational means of coping with precarious lives (Warin *et al.*, 2015; Zivkovic *et al.*, 2015).

The extent to which these cultural and social contexts of food preferences impact acceptance of regulatory interventions addressing obesogenic environments has not yet been examined. The published article presented below addresses this gap. In adopting a critical theoretical approach to investigating socio-economic differences in opinions about regulations, the article draws attention to the social structures, political economy, and cultural factors influencing acceptance or rejection of the interventions. As such, this work generates important knowledge in describing how preventive obesity regulations may produce unintended social consequences, particularly for those groups whose health they are intended to improve.

Article: Socio-economic divergence in public opinion about obesity prevention regulations: is the purpose to 'make some things cheaper, more affordable' or to 'help them get over their own ignorance'?

### Rationale for journal choice

This article was published in *Social Science and Medicine*, a leading journal for research examining the social aspects of health with a broad reach to an interdisciplinary and international readership. Disseminating findings from the study in this journal presented an opportunity for this research to contribute to broader international debates about the inclusiveness of obesity policy development processes.

### Statement of authorship

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### Co-author contributions

By signing the statement of authorship, each author certifies that:

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Socio-economic divergence in public opinions about preventive obesity regulations: Is the purpose to 'make some things cheaper, more affordable' or to 'help them get over their own ignorance'?



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#### ABSTRACT

The potential for regulatory measures to address escalating rates of obesity is widely acknowledged in public health circles. Many advocates support regulations for their potential to reduce health inequalities, in light of the well-documented social gradient in obesity. This paper examines how different social groups understand the role of regulations and other public health interventions in addressing obesity. Drawing upon focus group data from a metropolitan city in southern Australia, we argue that implementing obesity regulations without attention to the ways in which disadvantaged communities problematise obesity may lead to further stigmatisation of this key target population. Tuana's work on the politics of ignorance, and broader literature on classed asymmetries of power, provides a theoretical framework to demonstrate how middle class understandings of obesity align with dominant 'obesity epidemic' discourses. These position obese people as lacking knowledge; underpinning support for food labelling and mandatory nutrition education for welfare recipients as well as food taxes. In contrast, disadvantaged groups emphasised the potential for a different set of interventions to improve material circumstances that constrain their ability to act upon existing health promotion messages, while also describing priorities of everyday living that are not oriented to improving health status. Findings demonstrate how ignorance is produced as an explanation for obesity, widely replicated in political settings and mainstream public health agendas. This politics of ignorance and its logical reparation serve to reproduce power relations in which particular groups are constructed as lacking capacity to act on knowledge, whilst maintaining others in privileged positions of knowing

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### 1. Introduction

Escalating rates of obesity in Australia and elsewhere have prompted calls from public health advocates for preventive regulations to counter obesogenic environments (Swinburn et al., 1999). Regulations seek to reduce the financial or physical accessibility of unhealthy foods, or decrease the appeal of these foods relative to healthier alternatives. These measures are premised upon socioecological understandings of obesity which propose that because eating practices are embedded in social contexts, multidisciplinary policy interventions targeting environmental determinants of dietary patterns are necessary to change population behaviours

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### (Egger and Swinburn, 1997).

For many advocates, reducing health disparities between high and low socio-economic groups is a key rationale for the use of regulatory approaches (Baum and Fisher, 2014; Magnusson, 2008a; Walls et al. 2011). However, these measures may impose additional hardships upon deprived groups. Little is known about how views about obesity regulations vary across social strata, or how public support for regulations relates to understandings about the relationship between obesity and socio-economic status.

This paper critically examines perspectives on obesity regulations in different social classes. We first summarise the case for moving from education-based interventions to regulations, briefly review current action to address obesity in Australia, and discuss the complexities of regulating to address socio-economic inequalities in obesity. We then describe our analytical frame, employing work on the politics of ignorance (Tuana, 2004, 2006)

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and class distinction (Bourdieu, 1986; Bottero, 2005; Cockerham, 2005) to theorise how knowledge about health and nutrition, as embodied cultural capital, functions to enact class distinctions. Using focus group data from socio-economically distinct areas in metropolitan Adelaide, South Australia, we then examine how people from different social classes offered different explanations for obesity and the projected efficacy of regulations. To conclude, we suggest that the intersection of different permutations of knowledge/ignorance with social structuration serves to reproduce power relations which may preclude meaningful action to reduce obesity-related health inequalities.

### 2. The case for regulations

Debates about the role of regulations in addressing obesity are often characterised by polarized thinking and moral posturing, with the potential health benefits and the logic of a collective response often outweighed by economic and libertarian concerns (Baum and Fisher, 2014; Townend, 2009). Obesity is commonly framed in these debates as a matter of individual responsibility, resulting from imprudent dietary choices, sedentary leisure time, and a lack of awareness of the causes of obesity and associated risks (Henderson et al., 2009; Lupton, 2013; Townend, 2009).

From a policy perspective, this framing has encouraged a focus on individual behaviour change through educative health promotion approaches including social marketing, dietary guidelines, and school-based programs (Department of Health (2014a)), However, education-oriented approaches have had negligible impact on obesity prevalence (Campbell et al., 2001; Flynn et al., 2006; Walls et al., 2011), and have been criticised for their potential to exacerbate health inequalities (Bambra et al., 2012; Baum, 2007, 2011). As demonstrated in other areas of public health, including smoking cessation and skin cancer prevention, education is of limited effectiveness in changing behaviours in those populations at highest risk of adverse health outcomes, and therefore may operate to widen existing socio-economic inequalities (Montague et al., 2001; Niederdeppe et al., 2008). In the case of obesity, social marketing has been found least effective in changing behaviours amongst those in disadvantaged groups (King et al., 2013).

Educative interventions, grounded in psychosocial theory (e.g. Bandura, 1986), aim to modify individuals' knowledge, attitudes, and self-efficacy in order to motivate behaviour change and thus presuppose that a primary barrier to healthier behaviours is lack of knowledge of health risks or the benefits of behaviour change. These measures thereby undervalue the extent to which diet, physical activity and the priority of health are socially embedded (Baum and Fisher, 2014; Delormier et al., 2009; Travers, 1997; Warin et al., 2015). The social contexts of health behaviours, such as employment, education, housing and social connectedness, may enable or restrict action upon health promotion messages (Baum and Fisher, 2014). These contexts may also encourage or discourage resistance to 'healthy lifestyle' messages, which may be perceived as incongruent with the everyday adversities of deprivation or reflect classed 'tastes of necessity' (Bourdieu, 1984:178) for 'unhealthy' foods (Warin et al., 2015; Zivkovic et al., 2015). In contrast, regulatory measures addressing the 'obesogenic environment' (Swinburn et al., 1999; see Magnusson, 2008b for a summary of possible options) are considered by many public health advocates to be a more effective and equitable approach to obesity prevention because of their attention to these environmental contexts (Baum and Fisher, 2014; Friel et al., 2007; Magnusson, 2008a). Public health advocates argue that obesity prevalence and related health inequalities will not decrease without comprehensive regulatory intervention (Magnusson, 2008a; Swinburn, Education-oriented obesity interventions have also been criticised for their potential to contribute to stigmatised attitudes towards obesity as, by disregarding social contexts, they position individuals as the locus for change and as morally remiss for failing to act (Lupton, 2015; MacLean et al., 2009). In contrast, regulations are argued to diminish these invocations of personal responsibility by de-emphasising individual behaviours relative to the culpability of other powerful stakeholders, including governments and food industry (Guthman, 2013; Kirkland, 2011). Further, these measures are seen to be less stigmatising of obese individuals (and of disadvantaged groups often positioned as 'at risk' of obesity) because 'all people are considered as beneficiaries of an intervention, and specific groups are not "targeted" for "fixing" (MacLean et al., 2009:90; see also Kirkland, 2011).

Some obesity interventions recently implemented in Australia have attempted to move away from education towards approaches which acknowledge environmental determinants of obesity. For example, some community-level obesity prevention programs have ostensibly adopted socio-ecological approaches (most notably, Healthy Together in Victoria and Opal in South Australia; DHHS, 2015; SA Health, 2012a). However, these interventions have a strong social marketing foundation and low reach and scope compared to regulatory measures. Other recent efforts include a voluntary front-of-pack nutrition labelling system for packaged foods, implemented in June 2014 (Department of Health (2014b)), and mandatory kilojoule labelling for fast food menus has been introduced in some state jurisdictions (NSW Food Authority, 2014; SA Health, 2012b); representing the first regulatory efforts to explicitly address obesity in Australia.

# 3. The complexity of regulating to address socio-economic inequalities in obesity

While addressing socio-economic inequalities in health is an important goal, the focus on alleviating the burden of obesity in lower social strata may work to discount the complexities of the relationship between obesity and social class: the social gradient for obesity exists predominantly for women, while the highest rates of overweight and obesity in Australia are amongst middle class males (ABS, 2013); a detail often absent from obesity policy debates. Interventions seeking to reduce obesity-related health inequalities, without attention to middle class obesity, may thus position those of lower social classes (and women in particular) as responsible for driving the 'obesity epidemic'.

Further, the use of regulatory measures would not wholly resolve concerns that have been levelled at educative interventions about the moralistic framing of obesity as a personal failing. Regulations, too, have been criticised for deploying moral assumptions about the behaviours of certain demographic segments in seeking to create environments for virtuous consumer choices (Guthman, 2013; Kirkland, 2011). Many proposed obesity regulations draw on assumptions about what drives behaviour in disadvantaged areas that are deeply rooted in middle class norms of consumption. These operate to construct and reproduce middle class lifestyles as healthy and pathologise those of lower classes (Kirkland, 2011).

In particular, 'obesogenic environment' explanations for the relationship between obesity and disadvantage assert that a lack of access to nutritious foods, the ubiquity and affordability of unhealthy food, and a dearth of appropriate recreational spaces explain the prevalence of obesity in disadvantaged areas. This has been criticised by Guthman (2013) as an example of 'problem closure', wherein assumptions about what drives behaviours in 'obesogenic' areas operate to foreclose alternative conceptualisations of the relationship between obesity and socio-economic disadvantage. While ecological features are not irrelevant, they

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are inseparable from other aspects of socio-economic status. Regulations such as food taxes and urban planning restrictions which seek to address food affordability and access, for example, do not attend to the broader contexts of food and eating in disadvantaged areas. Classed biographies and 'tastes of necessity' (Bourdieu, 1984:178) may thus limit reductions in obesity even if lower class environments were remade more like those of the middle classes.

# 4. Privileging the capacity for choice: class and ignorant obese bodies

Arguments made by public health advocates about the potential for regulations to tackle some of the most complex aspects of the 'obesity problem' (namely, its alignment with social disadvantage and the stigmatisation of obesity) inadequately account for the relationships between obesity and the lived experiences of deprivation, and obesity's *ipso facto* inference of moral failure in public discourse. Our focus is to foreground the relevance of the social and classed contexts of obesity to obesity policy debates by examining how public perspectives on obesity regulations differ across social classes

The contemporary shift to neoliberal governmentality, with an emphasis on self-surveillance and regulatory practices operating to construct individuals as both capable of, and responsible for, averting obesity (Wright and Harwood, 2009), has seen the emergence of new modes through which class distinctions are expressed. Although class is rarely actively claimed as a source of identity, classed identities are enacted implicitly through the social and cultural practices of individuals and communities as they construct their own identities relationally through comparisons with others (Bottero and Irwin, 2003; Savage, 2000). Class works to (re)produce social hierarchies and identities by acting 'as a constraint on aspirations and tastes, social networks and resources' (Bottero and Irwin, 2003;470).

For Bourdieu (1986), class hierarchies are enacted through unequally distributed constellations of economic, cultural and social capital; acquired by individuals as they move through institutional (e.g. education) and social spaces. Class distinctions are expressed through individuals' bodies and everyday practices, with lifestyles and dispositions to health themselves being resources used by individuals in processes of hierarchical differentiation and distinction (Bottero, 2005; Cockerham, 2005). The healthy lifestyles of the middle classes, underpinned by an investment in the self, are part of this process of class distinction; reflecting the acquisition of embodied forms of cultural capital. The unequal distribution of this capital across society yields profits of distinction for those possessing it, and is therefore an indicator of status relative to those in lower social strata (Bourdieu, 1986:49).

Knowledge about health and nutrition is one permutation of embodied cultural capital. The common framing of obesity as a self-inflicted condition ensuing from a lack of knowledge (Henderson et al., 2009; Lupton, 2013; Townend, 2009) is part of the process through which class differences are enacted. This framing implies that averting obesity is a deliberate and rational process; a specific competence arising from education about what is healthy. The notion that normal weight bodies result from rational, informed choice positions those with the capacity to make healthy choices as knowers; a position of value which can only be maintained relationally by the ignorance of those who are obese.

Our use of ignorance in this context is informed by Tuana's (2004; 2006) work on the politics of ignorance, wherein she posits that ignorance is actively constructed and sustained through social structures and practices, rather than something that is simply not (yet) known. In this sense, ignorance is a socio-politically cultivated product inextricably related to social structuration and

power. Understandings of obesity as a function of ignorance are underpinned by taken-for-granted assumptions about obese bodies which presuppose a high degree of agency in lifestyle choices and correspondingly empowering life chances (Cockerham, 2005), while also positioning middle class values of self-investment as normative. As the life chances of those in higher social strata enable an expanded range of life choices and a greater sense of one's own ability to influence life outcomes, alternative explanations for obesity which acknowledge that life chances can constrain the choices of those in lower social strata may be discounted. In this sense, ignorance as an explanation for obesity functions to preserve the privileged positions of those in higher social strata; implying that differential levels of knowledge, rather than the unequal experience of structural constraints and resultant 'tastes of necessity' (Bourdieu, 1984:178), underpin the social gradient of obesity. This framing of body weight as being wholly within the realm of individual control operates to fortify the status and moral virtue of non-obese bodies by implying a greater degree of self-discipline and self-investment (Skeggs and Loveday, 2012); reflecting longstanding moral concerns about food and the body in Western culture (Coveney, 2008).

This paper traces the production of ignorance in obesity discourse, in order to reveal the role of power in the construction of what is 'not known', and in defining who can inhabit positions of 'knowing' (Tuana, 2004, 2006). We draw on Tuana's (2006) 'taxonomy of ignorance' and Bacchi's (2009) work on policy problematisations to argue that certain manifestations of ignorance intersect with power to problematise obesity differently in different social settings. This operates to position certain regulatory measures as viable interventions to address obesity. These permutations of ignorance underpin a classed bio-politics of obesity prevention (Wright and Harwood, 2009), as they function to produce certain reifications of the 'problem' of obesity and thereby restrict the possibilities for reparation. Ignorance therefore operates to reinforce social structuration and divisions which marginalise those already marginalised and privilege those already in positions of privilege.

### 5. Methods

We used semi-structured focus group discussions to examine views about obesity regulations amongst distinct social groups. Participants were drawn from two local government areas in metropolitan Adelaide, South Australia, selected for socio-economic disparity: Area A has a majority of high-income house-holds, and high levels of home ownership and tertiary education. Area B is characterised by a majority of low-income households, high rates of unemployment, public housing, and government income support. Age standardised rates of adult obesity are twice as high in Area B (35.2%) than Area A (17.6%; ABS, 2014; PHIDU, 2014).

Participants were recruited via flyers in public places, a Facebook page, and snowball referrals. Thirty-two individuals participated in one of four focus groups (two in each area) held in January 2015, each involving seven to nine participants and lasting 60–80 min. Sessions were audio recorded and transcribed (with participant names changed to protect privacy). Participants received a shopping voucher valued at AU\$40 as recompense. Ethics approval was granted by the University's Human Research Ethics Committee. Demographic characteristics of the groups are presented in Table 1.

Sessions were co-facilitated by authors one and four, who embody privileged positions as white, middle class, university educated women of 'normative' body weights. Given that obesity research is enmeshed with moral discourses, it is possible that our embodied presences in the research process in relation to those of

Table 1
Characteristics of focus group participants

		Ages	Females	Males
Area A	Group 1	18, 20, 27, 44, 45, 61, 66, 78	7	1
	Group 2	42, 43, 44, 45, 46, 47, 49, 54, 73	6	3
Area B	Group 1	27, 37, 41, 51, 66, 69,*	5	2
	Group 2	31, 33, 33, 47, 52, 53 55, 56	6	2

<sup>\*</sup> Age not provided.

our participants, as well as embodied relations between participants, may have influenced the views expressed (Warin and Gunson, 2013). Participants were not directly asked whether they identified as being overweight or obese. However, field notes were taken on researchers' observations of, and participant narratives about, body size, experiences with weight/weight loss, diet and physical activity habits, as well as social class characteristics including employment, education and housing. There were apparent class differences between the areas overall, and a higher proportion of participants in Area B were observed to be overweight.

A focus group schedule based upon Bacchi's (2009) 'What's the problem represented to be?' approach to policy analysis was developed to guide the discussions. This enabled examination of narratives that allow certain understandings of obesity and solutions to the 'problem' to be posited as true and viable, while precluding alternatives. Discussions concerned participants' understandings of whether obesity is a problem in Australia, causes of obesity, barriers and enablers to reducing obesity prevalence, and support for regulations. In order to avoid the views expressed being overtly positioned along socio-economic lines, participants were not advised that the study was being undertaken in socio-economically diverse areas, and were not explicitly guided to consider the relationship between obesity and socio-economic status.

The transcripts were analysed, using NVivo 10 software, to identify major themes in the problematisation of obesity (Bacchi, 2009). This involved coding for accounts of the causes of obesity, and views about the most appropriate policy approaches to address the 'obesity problem'. These problematisations were compared between Area A and Area B in order to illuminate how views about the need for government interventions differed between the groups. We also identified where themes were common across both areas.

Owing to the habitual silencing of disadvantaged voices in prominent obesity discourses and policy debates, we have centred our discussion of the findings in the views of those in Area B in order to bring prominence to these perspectives. However, we begin with a description of the problematisation of obesity in Area A in order to demonstrate the correspondence of socio-economically advantaged views with prominent discourses and, in alignment with our theoretical orientation, to show how these views are produced as legitimate and 'knowing' through the normative positioning of middle class lifestyles.

# 6. Socio-economically advantaged understandings of obesity prevention

In alignment with discourses of an 'obesity epidemic' (Evans, 2006), obesity was seen by participants in Area A to be an alarming problem threatening to envelop the nation's health care system and economy. Obesity was universally understood by these participants to result from a lack of knowledge about the harms associated with obesity, and how to prevent obesity through diet. With food and eating positioned as part of a health discourse,

participants believed only those ignorant of the poor nutritional quality of unhealthy foods would consume such products:

JAMES: maybe they weren't taught to cook, they don't have those skills, so they accept crap food. They'll eat crap. I mean, personally, I wouldn't eat bad food, I just, I would go hungry than eat shit, but a lot of people, you know, will eat that stuff and then suffer the consequences (Group A2)

As this passage demonstrates, participants in Area A distanced themselves from the consumption of unhealthy foods because they were themselves in a position of knowing. These devices of distancing and distinction operated as moral evaluations, serving to legitimate their own position in comparison to the obese subject who was 'epistemically disadvantaged' (Tuana, 2006). By this we mean that obese people (and those seen to be at risk of being obese, namely, those who consume 'crap food') were not assumed to have knowledge about the causes of obesity and its associated harms, but were instead required to actively acquire this knowledge.

The distinct 'Othering' apparent in the accounts of obesity and unhealthy food consumption articulated by participants in Area A worked to reject middle class obesity as a problem requiring intervention. While the relationship between obesity and socioeconomic disadvantage was not explicitly named, the constellation of unhealthy diets and other highly stigmatised behaviours worked to mark those who are obese as different from 'us', and constituted the 'problem' of obesity as something that occurred elsewhere, and to other people:

CHARLOTTE: It follows in families. You have obese parents, who tend have obese children. Like smoking and drinking habits and habits of work and not working as well (Group A2)

The future-oriented investment in the self that defines valued bodies in contemporary neoliberal societies illustrates the different vectors of time inhabited by valued and value-less bodies (Warin et al., 2015; Skeggs, 2011). Those in Area A, with access to the forms of capital enabling value to be accrued to the self for future investment, inhabited an elongated temporality compared with those in Area B. This enabled cultural decay across generations to be identified as a primary driver of current high obesity prevalence:

LYDIA: I think it's a problem through generations because kids are going to follow what their parents set, and then they're going to grow into that habit, and then their kids are going to grow into that habit, and then it's just gonna get worse and worse and worse because everyone's following the same path (Group A1)

As the above account demonstrates, many in Area A saw that knowledge about nutrition has been 'unlearned' (Tuana, 2004, 2006) across generations, leading to a spiralling of ignorance which moved knowledge about nutrition and health further beyond reach with each new generation. Measures designed to shock culturally-embedded complacency were considered likely to

effectively awaken society to this ignorance:

JOHN: I think making airlines charge by weight. A person's weight, for fares, that would have a huge cultural shift because so many people are flying these days, I think that would make, shock people to think 'oh my gosh, I am weighing this much, it's going to cost me that much to get myself, all of myself, from A to B' (Group A2)

### 6.1. Imagined barriers

The production of obese people as non-knowers saw high levels of support for nutrition education programs and food labelling, which were considered likely to be effective in reducing obesity prevalence. These measures were seen to have the power to eliminate social factors predisposing obesity:

JILL: I feel that the government needs to provide non-biased information and education ... providing information to every-body to help them get over their own ignorance about things. That it's not personal, that it does not have to be genetic, you do not have to eat like your parents do, or what your friends are doing (Group A1)

Ignorance about diet and nutrition was seen to account for structural barriers to healthy food consumption. In particular, the unaffordability of fresh produce was acknowledged by many in Area A to be a significant barrier to good diet quality. However, this barrier was seen to arise primarily through inaccurate perceptions about the affordability of fresh food compared with unhealthier options, rather than any genuinely prohibitive cost barriers; contradicting evidence demonstrating the relative unaffordability of healthy foods (Ward et al., 2013). Taxes operating to exaggerate cost disparities between 'junk' and 'fresh' foods were strongly supported in Area A, as a means to counter ignorance about the cost of a healthy diet:

RACHEL: I think there's a perception that junk food is cheaper than fresh food

SHAUN: Which it isn't

RACHEL: No. But people perceive that it is

SHAUN: So they perceive it, but if it's taxed more- (Group A2)

Many participants in Area A also reasoned that, for those on very low incomes, poor diets arising from affordability barriers could be improved through education about where to access cheaper healthy foods:

JUDITH: My greengrocer for instance does a tray of chopped up veg and it's about six dollars, and for that I make a really cheap stir fry ... So some of that is the education. That it's there. If you look under the counter they've got the bananas that are just starting to go off, you get about ten for two dollars. Smoothies. Or squish 'em up with yoghurt or something (Group A1)

In Area A, interventions seen to unduly restrict autonomy were strongly rejected. As such, participants objected to controlled food purchasing through income management: a policy currently active in certain areas of Australia (including Area B) under which a percentage of identified 'vulnerable' people's welfare payments are set aside through a special debit card to be spent only on 'priority

goods and services' (such as food, housing and clothing), and purchasing particular goods (including alcohol and cigarettes) is banned (Buckmaster and Ey, 2012). Instead, participants in Area A strongly supported nutrition education programs for welfare recipients. This was underpinned by the logic that by providing knowledge, welfare recipients would learn how to invest in their future wellbeing such that they would act in accordance with the dominant discourse; rendering unnecessary other measures restricting autonomy:

LYDIA: I think if there can be services offered to help [welfare recipients], or show them how they could be spending their income ... What if there was someone [at Centrelink] ... telling them how they could be spending their money! Or not telling them, it's suggesting to them. Not saying to them 'this is how you need to spend' but 'this is how you are spending it now, this is how you could be spending it'. So it's up to them. It could just be education (Group A1)

Underscoring the perception that ignorance rather than financial constraints was the key driver of obesity, there was support for welfare payments to be contingent on the completion of these education programs:

JILL: Or they have to do an online course, or if they can't do online, in a community-based thing, you've got to attend this course, a six or twelve week course in order to get your benefits, such and such, it's a form of forced education (Group A1)

# 7. Socio-economically disadvantaged understandings of obesity prevention

The 'obesity epidemic' discourse (Evans, 2006) that underpinned support for regulations in Area A was not strongly articulated in Area B. Instead, most Area B participants equated the problem of obesity with the problem of food affordability, with limited material resources seen to preclude consumption of healthy foods because of more pragmatic financial concerns:

ADYA: The fruit and vegetables, they should be cheaper. They are very costly things, how can one, the poor person can afford? They cannot pay the bills of gas and electricity (Group B1)

Many participants in Area B believed that the cost and perishability of fresh food contributed to the unaffordability of a healthy diet. These factors were identified as major barriers preventing those who regularly consume unhealthy foods from acting upon knowledge about nutrition that they already possessed:

ADYA: If the alternatives are there of equal value, people, they will choose the healthy things

EVE: Because if you're on a, you know, a tight budget for food to feed your family, and you've gone and spent sixty dollars on fruit and veg that goes off in two days, then what are you feeding your family for the rest of the week? You know, I find shopping at your local retailers, it's not worth it for the fruit and veg unless you're using it that day (Group B1)

With the impact of structural constraints upon diet quality widely acknowledged by participants in Area B, support was generated for government efforts to reduce the cost of healthier foods and to restrict fast food bargain marketing:

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BRIGITTE: I can go to the service station, buy a sandwich for eight dollars, or I can go to McDonalds and get the Big Mac meal and I think it's about seven dollars ... 'Cause I got a free Coke. Got a free chips ... So I mean, what would you go for? When it's about cost, especially on a Centrelink benefit, or a family that don't receive very much money ... I think we need to make some things cheaper, more affordable (Group B2)

### 7.1. A different set of priorities

For many Area B participants the conversation about obesity was intimately related to material disadvantage. In contrast to Area A, participants in Area B often employed the language of disadvantage, positioning themselves within these discourses, and described their own unhealthy food consumption. As Skeggs and Loveday (2012:487) also observed, the concept of disadvantage enabled participants to deflect interpretations of structural inequities as their own fault:

PAM: I think that what happens, and it's a really sad way of the world, is that the less you come from, the more you are probably geared up for failure in that area. Because the minute the money comes in, its 'okay, things that make you feel good: number one' and that's, I think, everybody. Will always take a little bit out of what they have to spend their money on for something that makes them feel good (Group B2)

Apparent in the above comment is the particular significance attached to unhealthy foods in Area B. As Warin et al. (2015) note, health promotion messages appealing to future investment fail to resonate for those living in precarious circumstances, for whom the future promises further anxiety and loss, or is beyond reach. These temporal connections to the present produce food as a source of enjoyment, comfort and reward, rather than as a means to invest in future health and wellbeing. These meanings attached to food were balanced against health promotion imperatives by many of those in Area B; indicating awareness of (though not action upon) what constituted a healthy diet:

MICHAELA: As far as I'm concerned a child can have what they like at school because they go to school and they've earned to have that recess ... And yeah, a treat's a treat, but not all the time. In moderation, yeah. Once a week? Yeah. My son's lucky to get Maccas once a month. And that's only because I'm on the dole, and that. But I guarantee you, if I had a full-time job, he wouldn't be eating Maccas. He sure as hell wouldn't be eating Hungry Jacks either. They're luxuries that you only get once a week or once a fortnight or once a month (Group B1)

Because food was positioned as a source of enjoyment in Area B, there was resistance to the use of taxes to address obesity. Increased taxes on unhealthy foods were acknowledged as likely to be highly effective in reducing consumption, however, these measures were seen by many as likely to prevent very deprived people from accessing small 'sweeteners' (Zivkovic et al., 2015) and therefore to decrease immediate quality of life. Taxes were also seen to position disadvantaged people as morally responsible for structural inequalities:

JEAN: I can see people who are, you know, on maybe benefits or very low incomes, they, you know, that might be what they have to look forward to, okay? So you're taking something, you're penalising someone for, you know, maybe eating at McDonalds

or something like that. I don't think that's a good way to—I think that's a real 'big brother' sort of attitude, to punish people (Group B2)

Understandings of food as a source of enjoyment worked to render traffic light nutrition labelling for packaged foods – strongly supported in Area A - as likely to be ineffectual in altering diet quality amongst those facing financial hardship:

KATE: But from what you're saying Brigitte, it sounds like you already know that apples are good, fruits are good, chocolate's bad, you've already picked the green, you've picked the red. That doesn't change what you're gonna eat, though. Do you know what I mean? Like, you know that you should be eating vegies.

BRIGITTE: I still enjoy the red. I really do (Group B2)

### 7.2. The power of privileged discourses

Despite many acknowledgements by participants in Area B that they knew what foods were healthy and unhealthy and were aware of the health risks that are commonly associated with obesity, some still saw educative interventions as a crucial component of government efforts to address obesity. The discourses of personal responsibility and ignorance as the causes of obesity are produced by those in positions of power and are ubiquitous across society, so they operate with a particular authority to distort how the 'obesity problem' is perceived by both those with and without power. Analogous to Mills' (2007:22) exploration of white ignorance, the ignorance operating to secure the privilege of those in advantaged groups was, in our study, not limited to those in positions of privilege due to the 'power relations and patterns of ideological hegemony involved'. This meant that the value of addressing structural determinants of obesity was overlooked in favour of addressing (presumed) ignorance, even by those participants with everyday experiences of deprivation. For instance, Eileen described often feeding her grandchildren \$2 McDonalds hamburgers for dinner; explaining that this was due to frequent television advertising of bargain deals at meal times, the proximity of the local McDonalds to her house, and the fact that she does not have a car which would enable her to shop at a supermarket. During the focus group session, she proposed bans on bargain fast food advertising, reformulation of fast food, subsidies for fresh produce, and improvements to public transport as possible policy approaches to address obesity. However, when asked to elect her single preferred approach, she stated:

EILEEN: I think, like, a big screen at the schools. What vegetables can make you become. And if you have too much sugar, what it can do to you, can make you, ya know, like, diabetes (Group B1)

Arguably, hegemonic neoliberalism led those living in conditions of social disadvantage to construct acceptable moral identities through narratives of coping and control (see Popay et al., 2003). With the dominant discourse being that all individuals possess equivalent capacity to accrue value to the self through a healthy diet, some Area B participants asserted that the impact of structural inequalities on health could be diminished through individuals' concerted efforts. For instance, Michaela explained how to cope with expensive utility bills and provide a healthy diet for her family:

MICHAELA: But there's other ways you can cook without electricity and gas. You gotta light a little fire ... Make sure you've

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got a hose near, you cook your barbie up, cook your food up, you put the fire straight out (Group B1)

Solutions to the 'obesity problem' offered by Area B participants which align with the views of those in Area A may therefore not simply reflect the power of those in advantaged positions: these solutions may also operate to resist discourses of environmental determinism (Guthman, 2013; Kirkland, 2011) used to justify paternalistic public health measures that may disproportionately impact on deprived groups.

### 8. Conclusion and implications

The central role of ignorance in enabling certain preventive obesity regulations to be seen as viable solutions to the 'obesity problem' draws attention to the practices of knowledge production that produce and sustain knowing and ignorant subjects and subjectivities. Ignorance was produced as the dominant explanation for obesity in Area A, with high levels of support for traffic light labelling measures, taxes on unhealthy foods, and nutrition education prerequisites for welfare recipients underpinned by the perceived ability of these measures to eliminate ignorance. In Area B, another narrative was also invoked to explain obesity, with attention directed to the role of structural inequalities. This led to high levels of support for subsidies for fresh produce (or other investment in fresh food supply chains), and restrictions on fast food bargain marketing. However, perhaps reflecting the power of dominant discourses, those in Area B also recognised educative measures as critical to government efforts to address obesity, despite accounts from those in Area B indicating that a lack of knowledge is unlikely to be a major cause of obesity amongst

The silence around disadvantage in the Area A discussions illustrates how the experiences and values of those marginal to the dominant 'subject of value' (Skeggs, 2011) are obscured in the production of knowledge. With the interests of contemporary neoliberal citizenship privileging the autonomous and rational individual, ignorance was produced as the only possible explanation for obesity amongst those whose life chances enable a choice between healthy and unhealthy lifestyles. Structural inequalities were therefore mostly rendered invisible. These findings indicate that any effort to address obesity, whether education-based or regulatory, may be positioned in dominant public discourses as action to address ignorance. Hopes for regulations to alleviate weight-based stigma through a reorientation of public discourses of personal responsibility are therefore likely to be overstated.

Tuana (2006) argues that those in positions of privilege exhibit a 'wilful ignorance' of the lives of those deemed inferior. She explains that:

Wilful ignorance is a deception that we impose upon ourselves, but it is not an isolated lie we consciously tell ourselves, a belief we know to be false but insist on repeating. Rather, wilful ignorance is a systematic process of self-deception, a wilful embrace of ignorance that infects those who are in positions of privilege, an active ignoring of the oppression of others and one's role in that exploitation (2006:11)

The lack of engagement in Area A with the notion that structural inequalities may be a central contributor to obesity is the result of configurations of interests in which certain topics are judged as less worthy of attention. Ignorance about the conditions that lead to the social patterning of obesity, the practices and institutions that underlie health and social inequalities, and the privileges that

accompany socio-economic advantage was active in these accounts. This 'wilful ignorance' of the conditions driving the social patterning of obesity had the ironic outcome of producing ignorance as an explanation for obesity.

In Area A, ignorance of the role of structural inequalities in causing population obesity may be a case of Tuana's (2006:4) 'Knowing that we know, but not caring to know'. It is not that structural factors such as food affordability were entirely overlooked, however participants in Area A discounted these explanations, instead arguing that affordability barriers ultimately resulted from a lack of knowledge and effort. These accounts operated to render invisible the relationality that structures advantaged and disadvantaged subjectivities. Recognition of this relationality would require acknowledgement of the interdependences that produce the power of socially advantaged groups (Sullivan and Tuana, 2007:5). Wilful ignorance of social determinants and structural inequities therefore obscured the classed politics that promotes alignment with 'healthy lifestyle' discourses and maintains social privilege.

While evidence demonstrates that education-oriented interventions are not effective in reducing obesity prevalence (Campbell et al., 2001; Flynn et al., 2006; Walls et al., 2011), such approaches have strong support in popular discourse as they fit within broader narratives in which obese people are (ignorant) agents. Knowledge about nutrition, consumption of the 'right' foods, performing physical activity for leisure, and their embodied articulation, serve as markers of social privilege. By positioning obesity as the result of ignorance, socially advantaged groups gain the ability to - literally - control disadvantaged groups through regulations, because of their supposed failure to autonomously comply with neoliberal imperatives to accrue value to the self. Ignorance of the structural determinants of obesity acts to maintain the status quo, as it engenders support for interventions addressing 'ignorance' about nutrition. In contrast, attempts to challenge the effects of disadvantage through robust regulatory measures addressing food and social environments necessitates challenging the classed politics that maintains advantaged groups in positions of advantage.

Our study has demonstrated 'wilful ignorance' in socioeconomically advantaged groups about the structural bases of high obesity prevalence in Australia. This functioned to produce certain reifications of the 'obesity problem' that restricted possibilities for reparation; underscoring a classed bio-politics of obesity prevention. Challenging the influence of such views on the development of obesity prevention policy may open up alternative possibilities for obesity prevention to meaningfully address drivers of health and broader social inequalities.

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# **Chapter Six**

# Revealing power relations through public views about preventive obesity regulations

Departing from the methodological approach underpinning the preceding two chapters, the article presented in this chapter employs a quantitative cross-sectional survey to explore distributions of views about preventive obesity regulations across the South Australian population.

So far, I have drawn upon theoretical resources on emotion, ignorance, and social class to explain the ways in which contemporary cultural environments function to configure obese people (and those in lower social strata deemed at risk of obesity) as 'national abjects' (Tyler, 2013) to be brought forth for instruction about acceptable ways of living. I have shown that views about the forms of regulations that are most acceptable to provide this instruction intersect with moral discourses of obesity and classed norms associated with food and health. These reflect the truth claims of dominant biomedical and health institutions, while refusing the possibility of alternative knowledges about food, bodies, and health. This has led to support for interventions which enact a pedagogical function (to correct perceived ignorance about the causes of obesity) or impose moral culpability (to incite recognition of harms purportedly imposed upon the body politic). However, as shown in Chapter Five, those residing in a socio-economically disadvantaged area articulated how proposed regulations were at odds with material and embodied experiences of poverty and were both punitive and of limited projected efficacy.

In the preceding two studies, I have identified these discourses in the public domain, and have theorised how classed identities and power are reproduced through differential access to institutionally-sanctioned knowledges about health and the body. However, owing to the anonymity in Study One and the comparatively few participants across demographic categories in Study Two, it has not yet been possible to produce a comprehensive account of the relationship between public views about regulations and social power structures.

As such, the article presented in this chapter presents findings from a crosssectional survey. The survey identifies similarities and differences in views between demographic groups, using a sample designed to be representative of the South Australian population in order to enable statistical generalisations to be made. By examining the underlying rationale for public views, findings illuminate the 'regimes of truth' - that is, the institutionally-sanctioned knowledges and constellations of power – that engender endorsement of particular regulations. Considering patterns of support in conjunction with findings from the preceding two studies enabled me to theorise about the influence of social power structures on public support for preventive obesity regulations. In doing so, this study enabled me to translate key themes from the qualitative studies to make them palatable to a quantitatively-oriented policy audience. While qualitative research is commonplace in some health-related fields, the inability to generalise findings to the population level according to conventional quantitative research paradigms can lead to scepticism about qualitative findings among policy actors (Mays & Pope, 2000; Morse, 1991; Tashakkori & Teddlie, 2003). The sequential mixedmethods design of this research project has thus enabled me to harness the

exploratory strengths of qualitative methods, while also increasing the translational potential of the research (Creswell, 2013).

Survey findings demonstrate moderate to high levels of support for each of the regulations included in the study. The reasons provided for support or opposition suggest that, for much of the population, the role of governments in addressing obesity is to provide education in order to facilitate individuals' adoption of official health guidelines. Illustrating this, support was highest for mandatory implementation of nutrition labels on packaged foods. This was underpinned by a belief that labels will educate *other* people about nutrition; respondents were much less likely to report needing to use this information themselves. Further illustrating the pedagogical basis of public support for preventive obesity regulations, lower levels of support for taxation or urban planning interventions were aligned with beliefs about the ineffectiveness of these measures relative to education.

Survey findings demonstrate the pervasiveness of dominant obesity discourses, which problematise particular subjectivities, on support for different regulatory approaches. For instance, support for mandatory nutrition labels for personal use was most frequent among women, young people, and those in the most disadvantaged socio-economic group. These groups are commonly scrutinised for their abject embodiment, both culturally and in public health policy. This finding illustrates how these groups have adopted self-regulative imperatives more so than those whose subjectivities are less problematised, from whom responsibility slides.

In identifying how views about the acceptability of preventive obesity regulations vary across the population, the importance of the gendered dimensions of obesity

came to the fore. The level of support for regulations, and the reasons for support or opposition, varied by gender *within and between* socio-economic groups.

Extrapolating from these findings in light of the preceding qualitative studies and broader literatures on the intersection of social class and gender in relation to obesity, I argue that this reflects responsibilities for food provision and concerns about material disadvantage that are invariably classed and gendered.

The following section introduces the manuscript by outlining the ways in which obesity prevention efforts differently impact upon differently classed and gendered bodies. In foregrounding the importance of the intersection of gender and class to obesity prevention efforts, I generate a discussion of the ways in which obesity regulations achieving broad public support may operate to reinforce social power hierarchies.

### The gendered dynamics of obesity prevention policy

The intersection of gender and class is a central – although often not explicit – consideration for obesity prevention. Public heath interventions are often targeted to population groups considered unable to avoid obesity due to either a lack of knowledge about the 'right' way to eat and live (Rawlins, 2009), or due to socioecological factors constraining healthy choices, as explained in Chapter Five. Other population subgroups with high levels of obesity, such as middle-class men, are often not problematised in obesity policy. This is because obesity in this group tends not to be attributed to a failure of knowledge or inability to make healthy choices, but rather is assumed to result from 'responsible' behaviour in other areas of life, such as working long hours (McPhail, 2009).

The tendency to target obesity among more marginalised populations incites disproportionate scrutiny of women's bodies and food practices in a number of ways. Illustrating this, the National Preventative Health Taskforce's *Australia: The Healthiest Country by 2020* report (National Preventative Health Taskforce, 2009a, 12) states:

Targeted approaches are needed for groups with disproportionately high rates of overweight and obesity, including Indigenous people, people of different cultural backgrounds (particularly from Pacific Islands and the Middle East), people of lower socio-economic status, children and young or pregnant women. Interventions aimed at children and pregnant women may have a significantly higher impact.

Here, women are explicitly singled out as targets for obesity prevention for two reasons. First, due to their reproductive capacity: epidemiological research linking maternal obesity and poor nutrition during pregnancy to the reproduction of obesity across generations has positioned women as causal agents in the proliferation of the obesity epidemic (Warin *et al.*, 2011). Second, the more rapid increase in obesity prevalence among younger women relative to other groups has configured this group as posing a particular threat. While obesity rates in Australia are currently highest among men, the report suggests that it is the risk to *future* national wellbeing that younger women embody, and which must be managed in the present.

As well, women are implicitly targeted in obesity prevention efforts aimed at children for other reasons. Women are disproportionately held responsible for the anticipatory governance of obesity through their material and social responsibilities for children's behaviour and weight. Mothers (not fathers) are expected to monitor their children's dietary intake and physical activity, and are blamed if their children are obese (Maher *et al.*, 2010a; Maher *et al.*, 2010b; Warin *et al.*, 2012; Zivkovic *et al.*, 2010). As described in Chapter Four, working mothers

are chastised for failing to provide proper home-cooked meals, and for engendering obesity among the next generation by neglecting to pass on important cooking skills to their children (see also Pocock, 2003).

The discourse of health inequalities also implicitly identifies women as targets for obesity prevention efforts, owing to the intersection between obesity, gender, and other axes of social marginalisation. As described in Chapter One, the socioeconomic gradient in obesity exists predominantly (and according to some studies, exclusively,) for women in Australia (ABS, 2015; Cameron *et al.*, 2003; Friel & Broom, 2007; King *et al.*, 2006), while among Indigenous people and those from minority ethnic and cultural backgrounds, women are more likely than men to be classified as obese (ABS, 2014a; National Preventative Health Taskforce, 2009a; O'Dea, 2008).

Well-meaning efforts to improve health among these groups are the primary motivation for the implementation of public health regulations. However, identifying these groups as targets for obesity prevention may result in them being disproportionately subjected to intrusive, moralising, patronising, and punitive direction of their lives (Kirkland, 2011). Without directing critical attention to the discourses and institutions that enable these public health efforts in a neoliberal context, the contingent power relations enabling the use of such interventions remain intact. As such, the ability for public health interventions to effectively deliver intended outcomes, without inadvertent social costs, remains undertheorised.

As Broom (2008) argues, perverse health consequences may result from public health interventions which lack reflexive and critical awareness of the social

environments and cultural economies within which prevention is practiced. In the case of smoking, she has argued that health promotion efforts drawing on discourses of individualism and expert biomedical knowledges have inadequately addressed gender and class as drivers of smoking behaviours. For example, women's generally lower rates of cessation are likely to arise through gendered factors, including the use of cigarettes to manage distress, to support sociability, or to resist the 'good girl' stereotype. Broom therefore argues that health promotion efforts inadequately informed by gender theory have resulted in a failure to reduce socio-economic and gendered differentials in smoking, despite a decline in overall rates of smoking.

In directing attention to the 'regimes of truth' underpinning the acceptance or rejection of preventive obesity regulations among different population segments, the analysis presented in this chapter illustrates the ideologies and contingent power relations that enable particular regulations to be regarded by different population segments as viable. As such, the manuscript presents new knowledge about how regulations may operate as a conduit through which social power structures are maintained.

# Article: Why do the public support or oppose obesity prevention regulations? Results from a South Australian population survey

# Rationale for journal choice

This article is currently under review for publication in the *Health Promotion Journal of Australia*. This is a prominent Australian public health journal with an accent on the impact of health policies on the socio-ecological determinants of health and health equity. As this concluding article draws together analytical strands from the research project as a whole, dissemination through this journal presents an opportunity to communicate findings to mainstream public health policy researchers and policy actors, whose practice I seek to influence. The mainstream public health community may not typically engage with the theoretically-oriented social science journals in which the previous articles were published.

### Statement of authorship

**Title of article:** Why do the public support or oppose obesity prevention regulations? Results from a South Australian population survey

Publication status: Under peer review (submitted 5 March 2018)

Name of principal	Lucy Farrell	
author (candidate)		
Contribution to the paper	Composed and tested questionnaire, corresponded with survey organisation, analysed survey data, conceived and conceptualised manuscript orientation and structure, reviewed literature, drafted and edited	
Certification	This paper reports on original research I conducted during the period of my Higher Degree by Research candidature and is not subject to any obligations or contractual agreements with a third party that would constrain its inclusion in this thesis. I am the primary	
Signature	author of this paper. Contribution = 85%  Date 22/3/18	

### Co-author contributions

By signing the statement of authorship, each author certifies that:

- the candidate's stated contribution to the publication is accurate (as detailed above);
- ii. permission is granted for the candidate in include the publication in the thesis.

Name of co-author	Professor Vivienne Moore	
Contribution to the Paper	Contributed to question construction, survey analysis, interpretation of results, conception of the manuscript structure, provided guidance for theoretical development, and undertook critical review of the draft manuscript.	
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Contribution to the Paper	Contributed to question construction and conception of the manuscript structure, provided guidance for theoretical development, and undertook critical review of the draft manuscript.
Signature	Date 21.3.2018

# Why do the public support or oppose obesity prevention regulations? Results from a South Australian population survey

### **Abstract**

### Issue addressed

Australian policymakers have acknowledged that implementation of obesity prevention regulations is likely to be facilitated or hindered by public opinion. Accordingly, we investigated public views about regulations targeting population nutrition.

### Methods

Cross-sectional survey of 2,732 persons, designed to be representative of South Australians aged 15 years and over. Questions examined views about four obesity prevention regulations (mandatory front-of-pack nutrition labelling for packaged foods; zoning restrictions to prohibit fast food outlets near schools; taxes on unhealthy high fat foods; and taxes on sugar-sweetened beverages). Levels of support (Likert scale) for each intervention and reasons for support/opposition were ascertained.

### Results

Views about the regulations were mixed: support was highest for mandatory nutrition labelling (90%) and lowest for taxes (40% to 42%). High levels of support for labelling were generally underpinned by a belief that this measure would educate 'Other' people about nutrition. Lower levels of support for zoning restrictions and taxes were associated with concerns about government overreach and the questionable effectiveness of these measures in changing behaviours. Levels of support for each regulation, and reasons for support or opposition, differed by gender and socio-economic status.

### **Conclusions**

Socio-demographic differences in support reflect gendered responsibilities for food provision and concerns about the material constraints of socio-economic deprivation. Engagement with target populations may offer insights to optimise the acceptability of regulations and minimise unintended social consequences.

### So what?

Resistance to regulations among socio-economically disadvantaged target populations warrants attention from public health advocates. Failure to accommodate concerns identified may further marginalise these groups.

Key words: Obesity, Inequality, Nutrition Policy, Public Opinion, Survey

### Introduction

Advocacy for obesity regulations is strong in Australia, despite slow progress by international standards. Interventions including mandatory nutrition labelling for packaged foods, marketing restrictions, food reformulation limits, and taxes have been introduced in a number of jurisdictions globally.[1-3] These examples stand in contrast to the Australian experience, where the implementation of regulations has been hindered by political and ideological resistance.[4] Australian policymakers have acknowledged that regulatory reform for obesity prevention is likely to depend on public support.[5, 6] Generating evidence of public support for obesity prevention regulations is therefore considered essential for the implementation of proposed measures.

Previous Australian surveys of public opinion about obesity regulations have found that support is high.[7, 8] However, these studies have provided only a partial understanding of public views. First, non-representative sampling and survey designs have been used, so generalisability is questionable.¹ Second, underlying rationales for public support for, or objections to, obesity prevention policies have not yet been examined.

Existing studies have inferred that high levels of support for obesity policies are indicative of public agreement with health promotion practitioners' conceptual explanations for health behaviours. For example, in their survey of Australian grocery buyers, Morley and colleagues found that 84% of participants supported

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<sup>&</sup>lt;sup>1</sup> While Pollard *et al.* assert that post-estimation weighting addresses biases arising through their telephone sampling methodology, there is potential for attitudinal data to be uniquely confounded by collection methodology. Face-to-face interviewing is preferable, as telephone respondents have been found to be more likely than face-to-face respondents to provide satisficing and socially desirable responses to these questions.[9]

kilojoule disclosure on menu boards of chain restaurants, despite few participants using kilojoule disclosures on food packaging. The researchers surmised that this incongruity may be 'due to consumers experiencing difficulties interpreting nutrition information panels'.[7]

Qualitative work on obesity discourses has highlighted that the reason for such discrepant findings may instead relate to an underlying moralism about obesity, including beliefs about failures of individual responsibility and the ignorance and laziness of obese individuals.[10] From this perspective, strong support for kilojoule disclosures on menus among those who do not use similar information on food packaging may reflect an 'Othering' of the obesity problem, wherein other people are believed to need this information in order to overcome ignorance about nutrition, but respondents believe themselves to be knowledgeable on the topic.[11]

The extent to which levels of support for obesity prevention regulations and associated reasoning differ between population groups has received little attention as an area of academic study. Revealing the underlying reasons for public preferences, and how these differ according to socio-demographic characteristics, could provide a theoretical basis for increasing the public acceptability of potential regulations.[12]

To this end, our research sought to answer the following questions:

- What is the overall level of support for, or opposition to, specific obesity regulations?
- Does support for, or opposition to, specific obesity regulations vary according to gender and socio-economic status?

 What are the main reasons underlying support for, or opposition to, specific obesity regulations? How do these vary according to sociodemographic characteristics?

### **Methods**

### Sample selection and interview procedure

Data were collected as part of the 2014 South Australian Health Omnibus Survey (HOS), an annual health survey designed to be representative of people aged 15 years and over. Face-to-face interviews were conducted by Harrison Health Research, using a computer-assisted personal interview questionnaire. The sample size was 2,732 (54.5% response rate).

The survey procedure entailed multiple stages of cluster sampling. First, a random sample of small areas (Australian Bureau of Statistics Statistical Area Level One) was selected with a sampling procedure that meant the probability of selection was proportional to population size. Then, within each area, a random sample of 10 households was selected for interview. One interview was conducted per household. Where more than one resident was aged 15 years or over, the person whose birthday was most recent was selected. Up to six separate visits were made to interview the person selected to participate.

All participants in the study gave informed consent to participate. Ethics approval was obtained from the University of Adelaide Human Research Ethics Committee.

### Measures

This study is part of a larger sequential mixed methods research program, so development of questions for the survey was informed by findings from a previous qualitative study of public attitudes towards obesity prevention regulations.[10]

Those findings included that, in many instances, the reasons underpinning public support coalesced around the role of regulations in promoting personal responsibility for preventing obesity and in ascribing blame to obese individuals. These reasons align with prominent neoliberal values which emphasise individual choice as the basis for all behaviour and the extension of free market principles to all realms of society. In the context of obesity, neoliberalism suggests that individuals are both capable of, and responsible for, averting obesity, and thus the role of governments in addressing the 'obesity problem' is to persuade individuals to voluntarily change their behaviour.[13]

Survey questions investigated views about a set of four regulations which represent different regulatory approaches to obesity prevention. In the preceding qualitative study these regulations were found to be contentious or to have unexpected reasons for support or rejection. They were: mandating the provision of nutrition information on front-of-packet labels for packaged foods; zoning restrictions to prohibit new fast food outlets being built near schools; taxes on unhealthy high fat foods; and taxes on sugar-sweetened beverages. For each regulation, one question gauged the level of support (on a five-point Likert scale: 'strongly against' to 'strongly in favour') and a further question asked about the main reason for support for, or opposition to, the regulation. Where possible, responses to the second question were assigned by the interviewer to a predetermined code, or an 'other (specify)' option was used. Reasons for support or opposition were collected together for the two taxation measures, as pre-testing showed that the reasons for views about taxes on sugar-sweetened beverages and unhealthy high fat foods did not meaningfully differ.

Development of the wording of questions and coding involved 24 in-depth 'cognitive interviews' [14] in which participants reasoned through responses aloud. Testing was conducted with a convenience sample of patrons of a public library in an area identified as low socio-economic status, and with parents at a kindergarten that had a high proportion of children from non-English speaking backgrounds (in a mid/high socio-economic status area). This testing method aimed to improve question comprehension by participants from diverse cultural and socio-economic backgrounds. Questions were refined following each test interview as required. Fifty further pilot test interviews were conducted by Harrison Health Research.

### **Analysis**

Data were weighted by the probability of selection, stratified by geographical area, and adjusted to June 2013 Estimated Resident Population age and sex benchmarks. This procedure is designed to adjust the survey data to infer results for the whole South Australian population aged 15 years and over, by accounting for over- and under-representation among some demographic groups. Levels of support for the selected regulations, the reasons for support or opposition, and variations by sex and socio-economic status were analysed by comparing percentages and by chisquare tests. Where relevant, confidence intervals for proportions were calculated to indicate the precision for the corresponding population proportion. All results reported in text are significant at p<0.05. Analyses were performed using SPSS version 22.

### Results

Characteristics of the sample are detailed in Figure 1.

Figure 1: Characteristics of the weighted general public sample (n=2,732)

Variable	Categories	n	%
Gender	Male	1,344	49.2
	Female	1,388	50.8
Age	15-24	436	16.0
0-	25-44	878	32.1
	45-64	863	31.6
	65+	555	20.3
Employment status(a)	Employed	1,541	56.4
	Unemployed	89	3.3
	Student	249	9.1
	Not in the labour force <sup>(b)</sup>	811	29.7
Socio-economic status <sup>(c)</sup>	1 (Lowest)	635	23.2
	2	442	16.2
	3	550	20.1
	4	577	21.1
	5 (Highest)	528	19.3
Geographical area	Adelaide metropolitan	2,046	74.9
	Country South Australia	686	25.1
Country/region of birth(a)	Australia	1,940	71.0
	New Zealand	33	1.2
	UK and Ireland	254	9.3
	Europe	140	5.1
	Asia Pacific	282	10.3
	South America	6	0.2
	North America	17	0.6
	Africa	57	2.1
Indigenous status	Aboriginal/Torres Strait Islander	54	2.0

<sup>(</sup>a) Excludes Other, Not known, and Not stated

### Support for the regulations

Figure 2 depicts levels of support for the selected regulations. Support was strongest for mandatory front-of-pack nutrition labelling for packaged foods, with most respondents reporting they were either 'in favour' or 'strongly in favour' of the measure. Opposition was strongest for taxes on unhealthy high fat foods and sugar-sweetened drinks, with close to half of respondents opposing these measures.

For the two regulations with a majority approval – nutrition labelling and exclusions zones – patterns of support exhibited a graded, progressive positive association. For the two least acceptable regulations – taxes on high-fat unhealthy

<sup>(</sup>b) Includes Home duties, Retired, and Not working because of work-related injury or disability

<sup>(</sup>c) Socio-Economic Indexes for Areas Index of Relative Socio-Economic Disadvantage quintile (South Australia)

foods and taxes on sugar-sweetened drinks – the proportion ambivalent about the measures was smaller than any other category; these measures tended to polarise the public.

66.5 75 75 Percent 50 50 34.2 28.5 23.2 19.5 25 25 6.1 6.1 2.9 1.2 0 0 Neither In favour Strontly Against Strongly Strontly Against Neither against in favour against in favour Mandatory front-of-pack nutrition labels for Exclusion zones for new fast food outlets packaged foods near schools 75 75 50 Percent 50 Percent 25.4 25.3 23.8 23.1 19.4 19.5 18.1 17.1 15.0 25 25 13.2 0 0 Strontly Against Neither Strontly Neither against in favour against in favour

Figure 2: Public support for the selected obesity prevention regulations (%)

### Reasons for supporting or opposing the regulations

Tax on unhealthy foods that are high in fat

Figure 3 summarises the main reasons for supporting or opposing the regulations. More than half of those supporting mandatory nutrition labels did so because they believed that this measure would educate other people about nutrition. Fewer reported being likely to use this information themselves, with less than one-third providing this reason.

Tax on sugar-sweetened drinks

Among those who supported exclusion zones, the predominant reason for support was that this would effectively discourage unhealthy diets. Opposition to the measure was most commonly because education was considered more

appropriate, along with doubt about the effectiveness in changing dietary behaviours.

Endorsement of taxes was most commonly on the grounds that the measure would effectively discourage consumption of unhealthy products, with close to three-quarters of those who supported taxes providing this reason. Reasons given for opposing taxes were varied: almost one-third of those opposed to this approach believed they already paid enough taxes. Opposition on the grounds that education would be a more appropriate approach, scepticism about effectiveness, and concern that the measure would be a government 'money grab' were also common. Of those who were not strongly supportive of taxes, 65.8% reported that they would be more supportive if the revenue collected was directed towards making healthy food cheaper.

Figure 3: Main reason for supporting or opposing the selected obesity prevention regulations (%)

	Overall	Men	Women	
Mandatory front-of-pack nutrition labelling for packaged foods(a)				
Main reason for support (net in favour 89.7%)				
Will educate others about nutrition	55.9	56.1	55.7	
Will use this information myself	31.8	29.3	34.1*	
Will stop food industry being misleading	6.5	9.3	3.8*	
Other reason	5.9	5.3	6.3	
Exclusion zones for new fast food outlets near schools				
Main reason for support (net in favour 62.7%)				
Will discourage people from buying unhealthy products	74.0	70.9	76.7*	
Will help to improve population health and reduce obesity	14.6	16.3	13.1	
Other reason	11.1	12.5	9.8	
Main reason for opposition (net opposed 17.9%)				
Should focus on education rather than regulation	39.5	42.3	36.2	
Will make no difference to children's diets	29.4	26.5	32.9	
Fast food outlets should be able to build where they like	5.1	5.1	5.0	
Positive aspects of fast food (like it, place to socialise, jobs)	5.6	8.7	1.8*	
Other reason	20.4	17.3	24.1	
Taxes on unhealthy high fat foods or sugar-sweetened drinks				
Main reason for support (net in favour 45.7% <sup>(b)</sup> )				
Will discourage people from buying unhealthy products	72.2	67.2	76.8*	
Contributes to burden of obesity on the economy	8.9	11.1	7.0*	
Will help to drive reformulation of unhealthy products	1.4	2.5	0.3*	
Other reason	17.5	19.2	15.9	
Main reason for opposition (net opposed 48.9%(c))				
Already pay enough taxes	29.1	27.5	30.8	
Should focus on education rather than regulation	21.8	21.8	21.8	
Will make no difference to people's diets	18.4	18.1	18.8	
This is a 'money grab' by governments	18.0	19.5	16.4	
Would unfairly impact on disadvantaged people	2.6	2.1	3.1	
Other reason	10.1	11.0	9.1	

<sup>(</sup>c) Includes those who oppose at least one taxation measure

#### Gender differences in support for the regulations

As shown in Figure 4, the proportion of women who supported nutrition labels and a tax on sugar-sweetened drinks was marginally larger than the corresponding proportion of men. There was greater discrepancy between men and women in support for exclusion zones. Support for a tax on unhealthy high-fat foods did not differ significantly by gender.

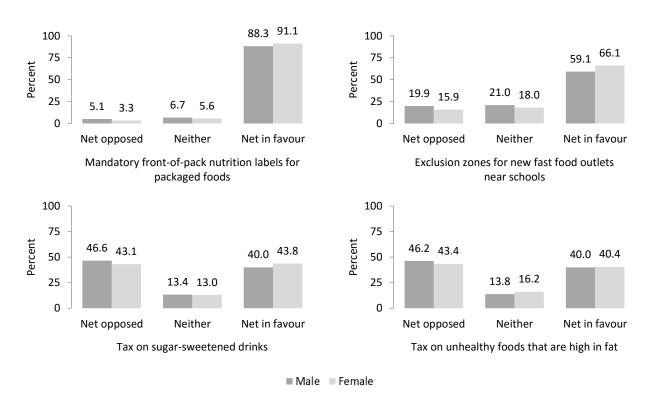
While, on the whole, levels of support for regulations were similar for men and women, in many instances men and women gave different reasons for their views.

<sup>\*</sup> Significant difference from men at p<0.05

As Figure 3 shows, women were most likely to support the regulations because they believed them likely to be effective in encouraging healthy eating and reducing population obesity. Men were most likely to support the regulations because of concerns about food industry conduct and the economic burden of obesity.

Of those who were not strongly supportive of taxes, women (69.2%, 95% CI 66.6–71.8) were more likely than men (62.2%, 95% CI 59.4–64.9) to be more supportive of taxes if the revenue collected was directed towards making healthy food cheaper.

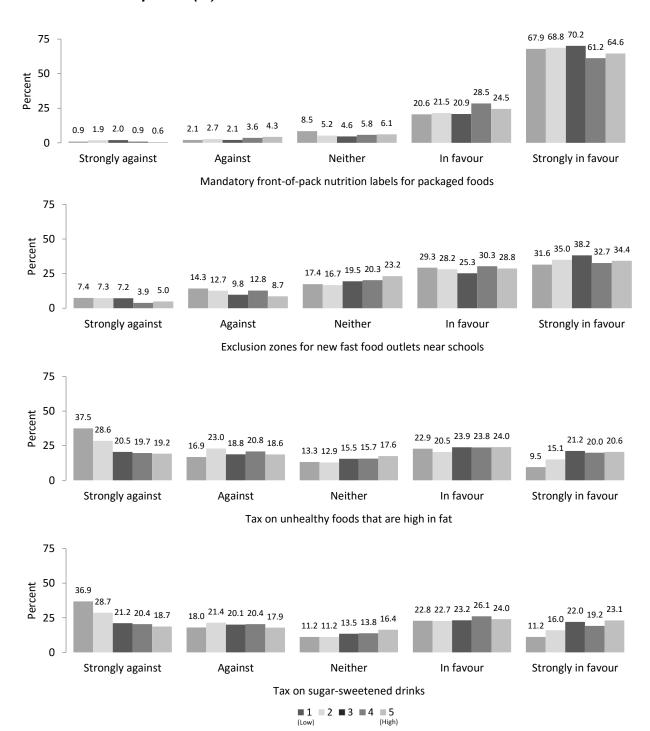
Figure 4: Support for the selected obesity prevention regulations by gender (%)



#### Socio-economic differences in support for the regulations

Figure 5 shows support for the regulations by socio-economic quintile. Patterns of support for mandatory nutrition labelling and exclusion zones for new fast food outlets near schools were similar across all socio-economic groups. Opposition to the two taxation measures followed a socio-economic gradient: more than half of those in the most disadvantaged group opposed a tax on unhealthy high-fat foods and sugar-sweetened drinks, compared with around one-third of those in the least disadvantaged group. The most disadvantaged group expressed considerably stronger opposition to taxes than any other group, and were least likely to increase their support if the revenue generated was used to subsidise healthy foods (60.5%, 95% CI 56.4 to 64.5, compared with 73.0%, 95% CI 68.8 to 76.9 of those in the fourth quintile, who were most likely to increase their support for taxes if healthier food was subsidised as a result).

Figure 5: Support for the selected obesity prevention regulations by socioeconomic quintile (%)<sup>(a)</sup>



<sup>&</sup>lt;sup>(a)</sup>Socio-economic Index for Areas Index of Relative Disadvantage

As shown in Figure 6, reasons given by those in the most disadvantaged socioeconomic quintile to explain their views about the regulations were in many
instances different from the other socio-economic groups. The most
disadvantaged group were only slightly more likely to support mandatory nutrition
labelling for the benefit of others rather than for personal use, in marked contrast
to more advantaged groups, and they were more likely than any other group to
report wanting to use the information themselves. Among those opposing
exclusion zones, those in the most disadvantaged group were least concerned that
the measure represented over-regulation. Instead, this group explained their
opposition in terms of concerns that the intervention would have little impact on
children's diets.

Across all socio-economic groups, the predominant reason for supporting taxes was a belief that the measures would discourage people from buying unhealthy products. Turning to opposition, respondents in the most disadvantaged group were much more likely to express concerns about the financial impact of taxes, and were less likely than those in other socio-economic quintiles to reason that obesity prevention should be about education rather than regulation. While opposition to taxes on the grounds that the measure would unfairly impact disadvantaged groups was low overall, opposition for this reason was least common among those in the two most disadvantaged groups.

Figure 6: Main reason for supporting or opposing the selected obesity prevention regulations by socio-economic quintile (%)(a)

Will use this information myself       39.6       31.3*       30.2*       25.         Will stop food industry being misleading       9.1       8.0       5.3*       6.         Other reason       7.6       3.8*       4.0*       6.         Exclusion zones for new fast food outlets near schools       Main reason for support (net in favour 62.7%)         Will discourage people from buying unhealthy products       67.3       69.9       75.7*       77.         Will help to improve population health and reduce obesity other reason       21.0       15.5*       5.9*       8.         Main reason for opposition (net opposed 17.9%)       Should focus on education rather than regulation       28.2       46.3*       38.8*       37.         Will make no difference to children's diets       39.3       31.2       17.0*       34.         Fast food outlets should be able to build where they like       5.2       1.9       5.7       7.         Positive aspects of fast food (like it, place to socialise, jobs)       2.2       5.8*       11.2*       3.         Other reason       25.1       14.8*       27.3       17.         Taxes on unhealthy high fat foods or sugar-sweetened drinks       Main reason for support (net in favour 45.7%[c])       Will discourage people from buying unhealthy pr	5 (High)	4	3	2	1 (Low)	
Will educate others about nutrition       43.7       56.9*       60.5*       60.         Will use this information myself       39.6       31.3*       30.2*       25.         Will stop food industry being misleading       9.1       8.0       5.3*       6.         Other reason       7.6       3.8*       4.0*       6.         Exclusion zones for new fast food outlets near schools       7.6       3.8*       4.0*       6.         Exclusion zones for new fast food outlets near schools       8.8       4.0*       6.         Main reason for support (net in favour 62.7%)       8.       4.0*       6.         Will discourage people from buying unhealthy products       67.3       69.9       75.7*       77.         Will make no difference to children's diets       21.0       15.5*       5.9*       8.         Main reason for opposition (net opposed 17.9%)       30.3       31.2       17.0*       34.         Fast food outlets should be able to build where they like       5.2       1.9       5.7       7.         Positive aspects of fast food (like it, place to socialise, jobs)       2.2       5.8*       11.2*       3.         Other reason       25.1       14.8*       27.3       17.         Taxes on unhealthy high fat foods o					•	Mandatory front-of-pack nutrition labelling for packaged foods(b)
Will use this information myself Will stop food industry being misleading Other reason 7.6 3.8* 4.0* 6.  Exclusion zones for new fast food outlets near schools Main reason for support (net in favour 62.7%) Will discourage people from buying unhealthy products Other reason 21.0 15.5* 5.9* 8.  Main reason for opposition (net opposed 17.9%) Should focus on education rather than regulation Positive aspects of fast food (like it, place to socialise, jobs) Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweet						Main reason for support (net in favour 89.7%)
Will stop food industry being misleading Other reason 7.6 3.8* 4.0* 6.  Exclusion zones for new fast food outlets near schools Main reason for support (net in favour 62.7%) Will discourage people from buying unhealthy products Other reason 21.0 21.0 21.0 21.5.5* 25.9* 8. Main reason for opposition (net opposed 17.9%) Should focus on education rather than regulation Positive aspects of fast food (like it, place to socialise, jobs) Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Already pay enough taxes Should focus on education rather than regulation Already pay enough taxes Should focus on education rather than regulation Tother feason Tother fe	9* 59.3*	60.9*	60.5*	56.9*	43.7	Will educate others about nutrition
Other reason 7.6 3.8* 4.0* 6.  Exclusion zones for new fast food outlets near schools  Main reason for support (net in favour 62.7%)  Will discourage people from buying unhealthy products 67.3 69.9 75.7* 77.  Will help to improve population health and reduce obesity 11.7 14.6 18.4* 14.  Other reason 21.0 15.5* 5.9* 8.  Main reason for opposition (net opposed 17.9%)  Should focus on education rather than regulation 28.2 46.3* 38.8* 37.  Will make no difference to children's diets 39.3 31.2 17.0* 34.  Fast food outlets should be able to build where they like 5.2 1.9 5.7 7.  Positive aspects of fast food (like it, place to socialise, jobs) 2.2 5.8* 11.2* 3.  Other reason 25.1 14.8* 27.3 17.  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products 73.9 74.4 73.2 72.  Contributes to burden of obesity on the economy 5.6 8.8* 6.7 11.  Will help to drive reformulation of unhealthy products 1.2 2.8* 0.8 0.  Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9%(c))  Already pay enough taxes 34.9 41.3* 20.0* 26.  Should focus on education rather than regulation 10.5 19.4* 26.9* 27.  Will make no difference to people's diets 17.2 11.4* 25.2* 18.  This is a 'money grab' by governments 27.2 18.5* 13.1* 12.  Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.	9* 31.0*	25.9*	30.2*	31.3*	39.6	Will use this information myself
Exclusion zones for new fast food outlets near schools  Main reason for support (net in favour 62.7%)  Will discourage people from buying unhealthy products Other reason  Main reason for opposition (net opposed 17.9%)  Should focus on education rather than regulation  Will make no difference to children's diets Positive aspects of fast food (like it, place to socialise, jobs) Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Contributes to burden of obesity on the economy Sill discourage people from buying unhealthy products Other reason  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support	7* 3.0*	6.7*	5.3*	8.0	9.1	Will stop food industry being misleading
Main reason for support (net in favour 62.7%)  Will discourage people from buying unhealthy products 67.3 69.9 75.7* 77. Will help to improve population health and reduce obesity 11.7 14.6 18.4* 14. Other reason 21.0 15.5* 5.9* 8. Main reason for opposition (net opposed 17.9%) Should focus on education rather than regulation 28.2 46.3* 38.8* 37. Will make no difference to children's diets 39.3 31.2 17.0* 34. Fast food outlets should be able to build where they like 5.2 1.9 5.7 Positive aspects of fast food (like it, place to socialise, jobs) 25.1 14.8* 27.3 17.  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products 73.9 74.4 73.2 72. Contributes to burden of obesity on the economy 5.6 8.8* 6.7 11. Will help to drive reformulation of unhealthy products 1.2 2.8* 0.8 0. Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9%(c)) Already pay enough taxes Should focus on education rather than regulation 10.5 19.4* 26.9* 27. Will make no difference to people's diets 17.2 11.4* 25.2* 18. This is a 'money grab' by governments Would unfairly impact on disadvantaged people 0.8 1.7 5.5*	6.7	6.5	4.0*	3.8*	7.6	Other reason
Will discourage people from buying unhealthy products  Will help to improve population health and reduce obesity Other reason  Main reason for opposition (net opposed 17.9%) Should focus on education rather than regulation Will make no difference to children's diets Fast food outlets should be able to build where they like Positive aspects of fast food (like it, place to socialise, jobs) Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Contributes to burden of obesity on the economy Will help to drive reformulation of unhealthy products Other reason  Main reason for opposition (net opposed 48.9%(c)) Already pay enough taxes Should focus on education rather than regulation Will make no difference to people's diets This is a 'money grab' by governments Would unfairly impact on disadvantaged people  67.3 69.9 75.7* 77. 14.6 18.4* 17.5 17.7 18.6 17.7 17.7 17.7 18.6 17.7 17.7 17.7 17.7 17.7 17.7 17.7 17						Exclusion zones for new fast food outlets near schools
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Other reason  Main reason for opposition (net opposed 17.9%) Should focus on education rather than regulation Should focus on education rather than regulation Will make no difference to children's diets Fast food outlets should be able to build where they like Fast food outlets should be able to socialise, jobs) Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Contributes to burden of obesity on the economy Will help to drive reformulation of unhealthy products Other reason  Main reason for opposition (net opposed 48.9%(c)) Already pay enough taxes Should focus on education rather than regulation Will make no difference to people's diets This is a 'money grab' by governments Would unfairly impact on disadvantaged people  21.0  15.5* 5.9* 8.8* 37. 28.2 46.3* 38.8* 37. 38.8* 37. 37. 38.8* 37. 38.8* 37. 38.8* 37. 38.8* 37. 39. 31.2 17.0* 34. 34.8 27.3 31.2 31.2 3. 32. 34.9 34.9 34.3* 36.8* 37. 36. 36.8* 37. 37. 37. 37. 38.8* 37. 39. 30. 40.8* 31.2 40.8* 32. 40.3* 41.3* 42.0.0* 42. 42.3* 42.3* 42.3* 42.3* 42.3* 42.3* 42.3* 42.3* 42.3* 42.3* 42.3	3* 79.7°	77.3*	75.7*	69.9	67.3	Will discourage people from buying unhealthy products
Main reason for opposition (net opposed 17.9%) Should focus on education rather than regulation 28.2 46.3* 38.8* 37. Will make no difference to children's diets 39.3 31.2 17.0* 34. Fast food outlets should be able to build where they like 5.2 1.9 5.7 7. Positive aspects of fast food (like it, place to socialise, jobs) 2.2 5.8* 11.2* 3. Other reason 25.1 14.8* 27.3 17.  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products 73.9 74.4 73.2 72. Contributes to burden of obesity on the economy 5.6 8.8* 6.7 11. Will help to drive reformulation of unhealthy products 1.2 2.8* 0.8 0. Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9%(c)) Already pay enough taxes Should focus on education rather than regulation 10.5 19.4* 26.9* 27. Will make no difference to people's diets This is a 'money grab' by governments Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.	5 13.8	14.6	18.4*	14.6	11.7	Will help to improve population health and reduce obesity
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Fast food outlets should be able to build where they like Positive aspects of fast food (like it, place to socialise, jobs) Other reason  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c)) Will discourage people from buying unhealthy products Contributes to burden of obesity on the economy Will help to drive reformulation of unhealthy products Other reason  Main reason for opposition (net opposed 48.9%(c)) Already pay enough taxes Should focus on education rather than regulation Will make no difference to people's diets This is a 'money grab' by governments Would unfairly impact on disadvantaged people  5.2 1.9 5.7 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7	3* 56.9	37.3*	38.8*	46.3*	28.2	
Positive aspects of fast food (like it, place to socialise, jobs)  Other reason  25.1  14.8*  27.3  17.  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products  Contributes to burden of obesity on the economy  Will help to drive reformulation of unhealthy products  Other reason  19.3  14.0*  19.3  15.  Main reason for opposition (net opposed 48.9%(c))  Already pay enough taxes  Should focus on education rather than regulation  Will make no difference to people's diets  This is a 'money grab' by governments  Would unfairly impact on disadvantaged people  25.1  14.8*  27.3  17.  14.8*  27.3  17.  27.4  28.8*  18.9  41.3*  20.0*  26.  27.  26.  27.  28.  18.5*  13.1*  12.  Would unfairly impact on disadvantaged people	_	34.0	_	_		
Other reason 25.1 14.8* 27.3 17.  Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products 73.9 74.4 73.2 72.  Contributes to burden of obesity on the economy 5.6 8.8* 6.7 11.  Will help to drive reformulation of unhealthy products 1.2 2.8* 0.8 0.  Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9%(c))  Already pay enough taxes 34.9 41.3* 20.0* 26.  Should focus on education rather than regulation 10.5 19.4* 26.9* 27.  Will make no difference to people's diets 17.2 11.4* 25.2* 18.  This is a 'money grab' by governments 27.2 18.5* 13.1* 12.  Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.		7.5	_			·
Taxes on unhealthy high fat foods or sugar-sweetened drinks  Main reason for support (net in favour 45.7%(c))  Will discourage people from buying unhealthy products Contributes to burden of obesity on the economy 5.6 8.8* 6.7 11.  Will help to drive reformulation of unhealthy products 1.2 2.8* 0.8 0.  Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9%(c))  Already pay enough taxes 34.9 41.3* 20.0* 26.  Should focus on education rather than regulation 10.5 19.4* 26.9* 27.  Will make no difference to people's diets 17.2 11.4* 25.2* 18.  This is a 'money grab' by governments 27.2 18.5* 13.1* 12.  Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.		3.8				
Main reason for support (net in favour 45.7% <sup>(c)</sup> )  Will discourage people from buying unhealthy products Contributes to burden of obesity on the economy 5.6 8.8* 6.7 11. Will help to drive reformulation of unhealthy products 1.2 2.8* 0.8 0. Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9% <sup>(c)</sup> ) Already pay enough taxes Should focus on education rather than regulation 10.5 19.4* 26.9* 27. Will make no difference to people's diets 17.2 11.4* 25.2* 18. This is a 'money grab' by governments 27.2 18.5* 13.1* 12. Would unfairly impact on disadvantaged people	4* 13.5 <sup>°</sup>	17.4*	27.3	14.8*	25.1	Other reason
Will discourage people from buying unhealthy products  Contributes to burden of obesity on the economy  Will help to drive reformulation of unhealthy products  Other reason  Main reason for opposition (net opposed 48.9%(c))  Already pay enough taxes  Should focus on education rather than regulation  Will make no difference to people's diets  This is a 'money grab' by governments  Would unfairly impact on disadvantaged people  73.9  74.4  73.2  72.  73.9  74.4  73.2  72.  73.9  74.4  73.2  72.  72.  73.9  74.4  73.2  72.  72.  73.9  74.4  73.2  72.  73.9  74.4  73.2  72.  72.  73.9  74.4  73.2  72.  8.8*  6.7  11.  11.  28.*  14.0*  19.3  15.  15.  15.  15.  16.  17.  17.  18.  18.  18.  18.  18.  18						Taxes on unhealthy high fat foods or sugar-sweetened drinks
Contributes to burden of obesity on the economy  Will help to drive reformulation of unhealthy products  Other reason  19.3  Main reason for opposition (net opposed 48.9%(c))  Already pay enough taxes  Should focus on education rather than regulation  Will make no difference to people's diets  This is a 'money grab' by governments  Would unfairly impact on disadvantaged people  5.6  8.8* 6.7  11.  2.8* 0.8  0.9  0.8  14.0* 19.3  15.  24.3* 20.0* 26. 27. 27. 28. 27. 28. 27. 28. 27. 29. 28. 29. 29. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20						Main reason for support (net in favour 45.7%(c))
Will help to drive reformulation of unhealthy products Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9%(c)) Already pay enough taxes Should focus on education rather than regulation Will make no difference to people's diets This is a 'money grab' by governments Would unfairly impact on disadvantaged people 1.2 2.8* 0.8 0.8 0.8 14.0* 19.3 14.0* 20.0* 26. 27. 28. 26.9* 27. 27. 28. 27. 28. 28. 29. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20	67.9°	72.5	73.2	74.4	73.9	Will discourage people from buying unhealthy products
Other reason 19.3 14.0* 19.3 15.  Main reason for opposition (net opposed 48.9%(c))  Already pay enough taxes 34.9 41.3* 20.0* 26.  Should focus on education rather than regulation 10.5 19.4* 26.9* 27.  Will make no difference to people's diets 17.2 11.4* 25.2* 18.  This is a 'money grab' by governments 27.2 18.5* 13.1* 12.  Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.	2* 11.8	11.2*	6.7	8.8*	5.6	Contributes to burden of obesity on the economy
Main reason for opposition (net opposed 48.9%(c)) Already pay enough taxes Should focus on education rather than regulation Will make no difference to people's diets This is a 'money grab' by governments Would unfairly impact on disadvantaged people  34.9 41.3* 20.0* 26. 27. 11.4* 25.2* 18.5* 13.1* 12. 27.2 18.5* 3.	7 1.9	0.7	8.0	2.8*	1.2	Will help to drive reformulation of unhealthy products
Already pay enough taxes 34.9 41.3* 20.0* 26. Should focus on education rather than regulation 10.5 19.4* 26.9* 27. Will make no difference to people's diets 17.2 11.4* 25.2* 18. This is a 'money grab' by governments 27.2 18.5* 13.1* 12. Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.	5 18.4	15.6	19.3	14.0*	19.3	Other reason
Should focus on education rather than regulation 10.5 19.4* 26.9* 27. Will make no difference to people's diets 17.2 11.4* 25.2* 18. This is a 'money grab' by governments 27.2 18.5* 13.1* 12. Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.						Main reason for opposition (net opposed 48.9%(c))
Will make no difference to people's diets17.211.4*25.2*18.This is a 'money grab' by governments27.218.5*13.1*12.Would unfairly impact on disadvantaged people0.81.75.5*3.	)* 20.3°	26.0*	20.0*	41.3*	34.9	Already pay enough taxes
Will make no difference to people's diets17.211.4*25.2*18.This is a 'money grab' by governments27.218.5*13.1*12.Would unfairly impact on disadvantaged people0.81.75.5*3.	2* 30.8	27.2*	26.9*	19.4*	10.5	Should focus on education rather than regulation
Would unfairly impact on disadvantaged people 0.8 1.7 5.5* 3.	2 20.6	18.2	25.2*	11.4*	17.2	
, , , , , , , , , , , , , , , , , , , ,	7* 14.0°	12.7*	13.1*	18.5*	27.2	This is a 'money grab' by governments
Other reason 9.4 7.7 9.3 12.	)* 2.9 <sup>-</sup>	3.0*	5.5*	1.7	0.8	Would unfairly impact on disadvantaged people
	9* 11.4	12.9*	9.3	7.7	9.4	Other reason

#### Patterns of opposition by gender and socio-economic status

As shown in Figure 7, opposition to the regulations across the socio-economic groups differed by gender in some instances. For women, opposition to exclusion zones followed a socio-economic gradient, while for men the level of opposition was similar across the groups. The difference between men and women's views was therefore modest in the most disadvantaged group, while among the most advantaged group there was considerable divergence apparent between the views of men and women.

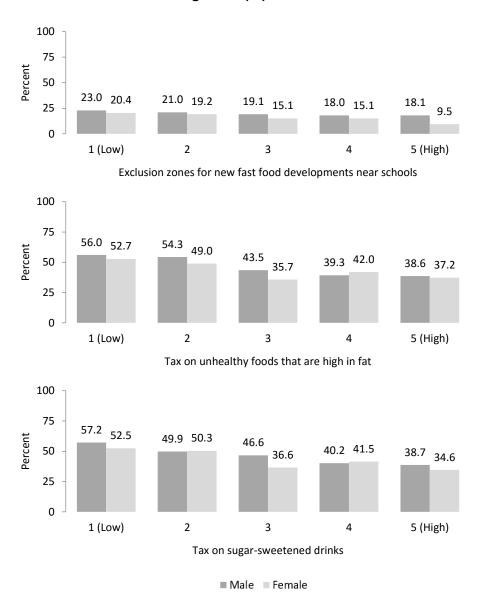
Includes those who are in favour of at least one taxation measure

Includes those who oppose at least one taxation measure

Significant difference from lowest quintile at p<0.05

Opposition to taxes was graded by socio-economic status for men. For women, those in the two most disadvantaged groups were most opposed to taxes, with the level of opposition plateauing in the more advantaged groups. There was therefore greatest variation between the views of men and women among those in the middle quintile.

Figure 7: Net opposition to the selected obesity prevention regulations by socio-economic status and gender  $(%)^{(a, b)}$ 



<sup>(</sup>a) Socio-economic Index for Areas Index of Relative Disadvantage

<sup>(</sup>b) Mandatory front-of-pack nutrition labelling for packaged foods not shown as net opposition <10%

Figure 8 shows the reasons for opposing the selected regulations by gender and socio-economic quintile. While for men the level of opposition to exclusion zones was similar across all socio-economic groups, the reasons for opposition differed considerably. The most common reason given by men in the most disadvantaged group was that exclusion zones would not be effective in changing children's diets; given by this group three times as often as men in the most advantaged group. In contrast, men in the most advantaged group were most likely to oppose exclusion zones because they believed that obesity prevention should be a matter of education rather than regulation. This reason was given by more than two-thirds of men in this group; twice as often as men in the most disadvantaged group.

Among women, there was less variation apparent in the reasons for opposing exclusion zones. However, women in the most disadvantaged group were more likely than any other group to oppose this measure because they did not believe it would be effective in changing children's diets: almost half provided this reason, compared with a quarter of women (and one in ten men) in the most advantaged group.

Opposition to taxes on the grounds that obesity prevention should be about education rather than regulation was more strongly influenced by socio-economic status for women than for men; this reason was given by women in the most advantaged group more than three times as often as those in the disadvantaged group. Women in the most disadvantaged group were more concerned that they already pay enough taxes.

Men in the most disadvantaged and advantaged groups were most likely to oppose taxes because they believed the measure would be a 'money grab' by governments,

while men in the median socio-economic quintiles were less opposed to taxes for this reason. Among women, opposition to taxes because they are a 'money grab' followed a socio-economic gradient, with this reason given almost four times as often by the most disadvantaged group than the advantaged group.

Figure 8: Main reason for opposing the selected obesity prevention regulations by socio-economic quintile and gender (%)<sup>(a)</sup>

	1 (Low)	2	3	4	5 (High)
Men					
Exclusion zones for new fast food outlets near schools (net opposed 19.9%)					
Should focus on education rather than regulation	30.7	50.2+	33.8	37.5	67.9+
Will make no difference to children's diets	35.7	32.3	13.7+	32.5	13.0+
Other reason <sup>(b)</sup>	33.7	17.6+	52.5+	30.0	19.1+
Taxes on unhealthy high fat foods or sugar-sweetened drinks (net opposed 50.7%) <sup>(c)</sup>					
Already pay enough taxes	30.6	41.0+	17.5+	28.7	18.1+
Should focus on education rather than regulation	11.9	20.9+	29.8+	21.9+	30.4+
Will make no difference to people's diets	16.8	10.6+	26.4+	17.3	19.4
This is a 'money grab' by governments	30.9	17.9+	10.2+	12.3+	21.9+
Other reason	9.8	9.7	16.2+	19.8+	10.3
Women					
Exclusion zones for new fast food outlets near schools (net opposed 15.9%)					
Should focus on education rather than regulation	25.5	42.4+	44.3*+	36.9+	37.7*+
Will make no difference to children's diets	43.4	30.1+	20.7*+	36.0	27.1*+
Other reason <sup>(b)</sup>	31.1	27.6*	34.9*	27.1	35.3*
Taxes on unhealthy high fat foods or sugar-sweetened drinks (net opposed 49.3%) <sup>(c)</sup>					
Already pay enough taxes	39.5*	41.6	22.7*+	22.9*+	22.5*+
Should focus on education rather than regulation	9.1	18.0+	23.9*+	33.3*+	31.3+
Will make no difference to people's diets	17.7	12.1+	24.0+	19.2	21.8
This is a 'money grab' by governments	23.2*	19.0	16.4*+	13.2+	6.3*+
Other reason	10.4	9.3	13.2	11.4*	18.1*+

<sup>(</sup>a) Socio-economic Index for Areas Index of Relative Disadvantage

#### **Discussion**

Survey findings demonstrate moderate to high levels of public support for the use of selected regulations for obesity prevention. Support was highest for mandatory front-of-pack nutrition labelling for packaged foods. This corresponds with previous research in Australia[7, 8, 15, 16] and elsewhere[17-24] which shows

<sup>(</sup>b) Categories with low cell counts collapsed

<sup>(</sup>c) Includes those who oppose at least one taxation measure

<sup>\*</sup> Significant difference from men in same socio-economic quintile at p<0.05

Significant difference from lowest quintile at p<0.05

greater public support for information-based obesity interventions compared with other policy approaches. These findings demonstrate the enduring dominance of the discourse of personal responsibility and the concomitant public appeal of behavioural health promotion interventions. This reflects the ethos of individualism and choice which underpin the dominant neoliberal political ideology.[25]

Interestingly, the most common reason for supporting nutrition labels in all sociodemographic groups was to educate *other* people about nutrition. This suggests that the majority of the population may not perceive nutrition education as personally relevant, and aligns with findings from our associated qualitative study that preventive obesity regulations are commonly viewed as a way to redress public ignorance. [reference suppressed for peer review] These findings reflect a popular belief that information provision is an effective mechanism for motivating healthy behaviours. [26] Such perceptions are discordant with evidence that shows education to be largely ineffective in changing population dietary patterns, and that more restrictive interventions addressing socio-environmental influences offer the greatest likelihood of impact. [27, 28] In particular, front-of-pack nutrition labelling has been found to have limited discernible impact on the healthiness of food purchases.[27, 29, 30] However, those in the most disadvantaged socioeconomic group - a key target population for obesity prevention policies and programs[31] - were more likely than those in any other group to report wanting to use nutrition labels themselves. This may reflect awareness among this group that they do lack nutrition knowledge, or alternatively, that these individuals have internalised dominant narratives that deprived groups are ignorant about the causes of obesity.[11]

Reasons for opposition to the use of regulations fell into three categories: beliefs about what is appropriate, beliefs about what is effective, and reasons reflecting a general distrust in government intervention to support population health.

Opposition to exclusion zones and taxes was most commonly based on respondents' beliefs that education would be a more appropriate means of improving population nutrition; opposition to labelling was low overall.

Our findings broadly correspond with a New Zealand survey which found that respondents considered food labelling more effective than a tax on foods high in fat or sugar, and restricting fast food outlets near schools.[17] Importantly, that survey identified that public support for obesity interventions was not directly correlated with beliefs about effectiveness of those measures; while participants considered a tax on foods high in sugar or fat likely to be moderately effective, this measure received the lowest endorsement.[17]

Findings from our survey may be useful for policymakers and public health advocates seeking publicly acceptable solutions for obesity prevention. Some researchers have sought to identify the most persuasive means to communicate the evidence base for regulations, in order to improve support for regulations.[19-23] This approach aligns with a 'deficit model' of public attitudes, whereby these researchers believe that acceptance of regulations would increase if the evidence base were better communicated. For instance, Walls and colleagues argue that:

Pressure on government to respond to obesity and chronic disease will surely grow as scientific evidence links obesity and poor nutrition to disease. Despite recent media attention the public remains poorly informed, often considering obesity to be an individual problem, requiring only diet restrictions and self-control.[32]

However, the survey findings reported here suggest that public views about obesity policy are more strongly influenced by ideological and moralising discourses than a lack of knowledge. In this scenario, the extent to which opposition can be reduced through improved communication about the socioecological causes of obesity is uncertain.[33] Attending to the ideological and moralising foundations of public views about preventive obesity regulations demonstrated in the survey and in our previous research[10, 11] may be more fruitful for improving alignment between preventive obesity policies and public views.

In addition, socio-demographic differences in views about regulations are illuminating for public health policy actors. As is well documented, there are differences between the health outcomes of different socio-economic groups. This relationship is often characterised as linear and unidirectional, rather than emerging differently according to 'patterned networks of social interaction'.[34] Taking this into account, we suggest that differences we found in relation to gender *across and within* socio-economic gradients, should be anticipated and further explored. To demonstrate the complexity and multiple reasons for support or opposition for obesity prevention regulations, we use a sociological and gender lens in this last section to suggest why these differences may occur.

Opposition to the regulations among disadvantaged groups is an important finding, given that addressing health inequalities is an objective of preventive obesity regulations.[31] Concerns raised by those in disadvantaged socio-economic groups about the financial impact of food and drink taxes and the ineffectiveness of exclusion zones indicate that many individuals experiencing deprivation do not share the enthusiasm of public health advocates about the potential health

benefits of regulations for disadvantaged groups. These concerns warrant attention. In particular, arguments that the regressive impact will be minimal and justifiable in light of the health benefits, as made recently in regards to the introduction of a tax on sugar-sweetened beverages in Australia,[35] should be examined in the light of this opposition.

Most notably, participants in the most disadvantaged group conveyed strong concerns about the anticipated financial impact of taxation. Food affordability has been identified as a significant issue in disadvantaged areas of Adelaide, with a week's supply of healthy food costing around 30 per cent of household income.[36] Taxes may therefore increase financial stress for those already in poverty, without addressing other influences on food choices. Those in the most disadvantaged group were less likely than any other group to increase their support for taxes if the revenue raised was used to subsidise healthy foods. This suggests that products targeted by taxes are consumed for reasons beyond low cost, and may maintain their appeal even when price is adjusted relative to healthier options. This finding may also reflect a lack of trust in governments to deliver on distributive promises: according to a recent Scanlon Foundation Survey, those in low-income groups have very low trust in government to 'do the right thing for the Australian people', while those in the most prosperous group are more likely than average to trust the government.[37] Distrust of governments and cynicism about government objectives have been identified in our previous research as important barriers to popular support for obesity prevention regulations.[11] Our findings point to a need to investigate more thoroughly the impact of regulations on those who experience socio-economic disadvantage, in order to identify barriers to healthy

diets which need to be addressed concurrently in order to optimise the effectiveness of regulatory obesity interventions.

Men expressed stronger opposition to the use of regulations, showed greater concern with the economic burden of obesity and the impact of regulations on economic prosperity, and were more attentive to the conduct of the food industry than women. This may indicate that men may attend more closely with particular economic aspects of neoliberal discourse than women; reflecting the strong 'male breadwinner' culture in Australia, in which masculine identities, forged in economic terms through employment, often take priority over caring roles.[38] Men's prioritising of the economic rather than health impacts of regulations suggests that men's views about obesity regulations may be shaped by the perceived invisibility of their own bodies in relation to fat discourses.[39]

In contrast, women's greater concern with the health impacts of regulations suggests that they tended to orient to the use of regulations through a lens of intense cultural scrutiny around their weight (particularly for higher SES women),[40] their material and social responsibilities for children's weight, and their greater risk of health (including reproductive) impacts associated with obesity.[41] As well, women's greater attention to the ability of the regulations to effect dietary changes may reflect their knowledge of the complexities of family food provision. The responsibility for feeding families usually still rests with mothers, despite changing patterns of women's paid work.[41, 42] Managing nutrition is a central tenet of mothers' 'foodwork', however it is not the only factor: other pressures including family food preferences, demonstrations of care, time shortages and budget constraints are also part of the problem of 'what's for dinner'.[43] Concerns expressed by disadvantaged women about the financial

impact of regulations and their likely ineffectiveness in driving dietary changes reflect how maternal food choices are negotiated within social and economic constraints. As ethnographic work in low income areas has shown, mothers' food practices can be a painstaking process of minimising food budgets (by choosing foods that are filling and unlikely to spoil), providing foods acceptable to husbands and children (for whom popular 'junk' foods can provide social acceptance and gratification), and reducing the time and energy devoted to preparing food (by choosing convenience meals).[44] As well, 'junk' foods can provide momentary pleasures and reduce stress arising from conflicts with children, and are an instrument used to cope with the stress of financial precarity.[45, 46] There are therefore a complex set of motivations stemming from mothers' balancing of caring responsibilities (more so in single parent households) with scarce time and financial resources that converge to outweigh health concerns in the provision of food in families from low socio-economic conditions. Failure to adequately engage with these factors may ultimately limit the effectiveness of the measures and produce deleterious consequences for women living in disadvantaged areas.[47]

Women in the two most disadvantaged groups expressed similarly high levels of opposition to the regulations, in contrast to markedly lower levels of opposition among more advantaged women. This pattern contrasts to a socio-economic gradient in men's views, which shows that socio-economic status has a particular influence on women's views about preventive obesity regulations. Concerns expressed by disadvantaged women were not discernible in analyses by socio-economic position or gender alone. The views of women from lower socio-economic circumstances are therefore likely be obscured in analyses of public views that do not engage with the intersection of gender and socio-economic

position. As Broom and Warin argue, [48] public health research and practice have inadequately considered the interplay of gender and social position, to the detriment of understandings of the broader social, economic, and political determinants of obesity. This limits the utility of obesity policy to improve the health circumstances of marginalised and vulnerable groups. Our findings point to the importance of specific engagement with women from lower socio-economic conditions regarding the implementation of preventive obesity regulations, particularly considering that an explicit goal of those advocating the implementation of such measures is to redress health inequities disproportionately impacting on this group. [49]

Some limitations must be taken into account in interpreting survey results. While the sample was designed to be representative of the South Australian population and data have been weighted to population benchmarks, the response rate (54.5%) may still affect the generalisability to a degree. Further, the survey only examined the main reason for support or opposition to each regulation, so other lesser reasons for public views remain unexplored. Also, the analysis only assessed a selected number of personal characteristics. Other dimensions that may influence attitudes towards the selected regulations (e.g. parent status, occupation, ethnicity) were not explored. Investigating the impact of social roles and cultural practices on opinions about preventive obesity regulations could be the focus of future research in this area.

#### Conclusion

Resistance to obesity prevention measures among socio-economically disadvantaged target populations has received only cursory acknowledgement or

has been dismissed as inevitable by some policy advocates.[35] We argue that stronger engagement with the concerns of these groups is required, as these may pose a substantial impediment to regulatory reform, as well as to the capacity for regulations to deliver equitable outcomes. As Sisnowski and colleagues found in their analysis of barriers to the implementation of preventive obesity policy in New York City, policymakers underestimated the strength and mobilisation of opposition from minority and civil rights groups concerned with the regressive impact of regulations.[50] This was ultimately identified to be responsible for the failure of the policy proposal. As one policymaker observed:

The group that surprised and disappointed us the most were the minority groups. On the food stamp proposal in particular, the hunger advocates came out very vocally against that. We were presented as somehow we were being mean to poor people.

As the surprise evident in the above passage demonstrates, inadequate engagement with key target populations may yield unexpected resistance to measures intending to alleviate health inequities: well-meaning efforts to improve the health of disadvantaged people can be intrusive, moralizing, and punitive when guided by middle class norms that neglect to account for the lived complexities of material disadvantage.[47]

Overall, our survey findings indicate that there is generally moderate to strong public support for the selected preventive obesity regulations. However, public views reflect beliefs about efficacy that align with neoliberal individual responsibility explanations for obesity and are largely inconsistent with current evidence. Differences in levels of support, and reasons for support or opposition, between socio-demographic groups point to the potential for key target populations' views to offer insights to optimise the acceptability of preventive obesity regulations and minimise deleterious unintended consequences.

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#### Post-script to manuscript

Owing to article length restrictions for the *Health Promotion Journal of Australia*, the manuscript presented above only explores differences in views by gender and socio-economic status. I chose to focus on these demographic characteristics as they are key social power hierarchies, and thus offer the greatest explanatory potential in concert with the theoretical analyses presented in the preceding chapters. However, survey results also showed important differences between age groups. These findings are summarised below.

#### Age differences in support for the regulations

In many instances, views held by those aged 15 to 24 years differed from those held by respondents in older age groups. As shown in Figure 10, support for exclusion zones, taxes on unhealthy high-fat foods, and taxes on sugar-sweetened drinks was lowest among those in the youngest age group. This was underpinned by lower levels of strong support for the regulations. However, strong opposition to the regulations was also low among those in the youngest age bracket, indicating that this group were, overall, more ambivalent about the use of regulations to address obesity.

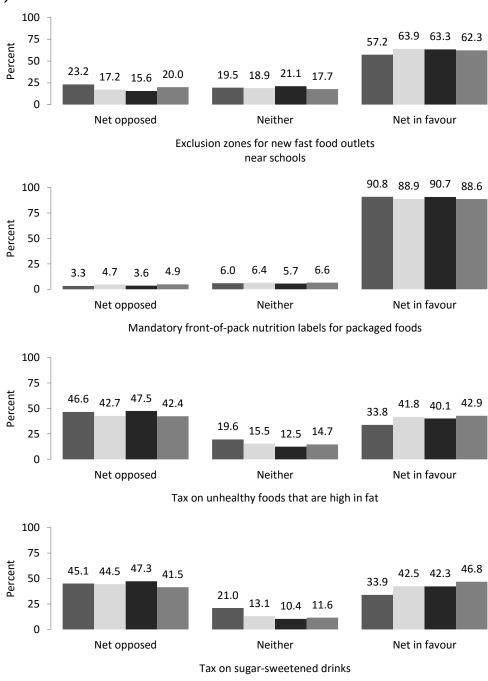


Figure 10: Support for the selected obesity prevention regulations by age (%)

As shown in Figure 11, reasons for supporting or opposing the regulations differed by age. Younger respondents were more likely than those in older age groups to support mandatory nutrition labelling because they would personally use the

■ 15-24 ■ 25-44 ■ 45-64 ■ 65+

information provided. In contrast, those in older age brackets were more likely to support nutrition labelling in order to impede food industry deceit.

Younger respondents were less likely than those in older age brackets to oppose exclusion zones on the grounds that obesity prevention should be a matter of education rather than regulation. Instead, younger respondents were considerably more likely to oppose the measure on the grounds that fast food outlets provide benefits, such as somewhere to socialise, jobs for young people, or because they enjoy eating fast food.

The youngest age group were more likely than older respondents to oppose taxes on the grounds that education is a more appropriate approach to obesity prevention. This group were also most likely to oppose taxes because they would unfairly impact on disadvantaged people. In contrast, those in older age groups expressed greater concern with the economic and financial implications of taxation: they were more likely than those in the youngest age group to support taxes on the grounds that the revenue raised would offset the economic burden of obesity, and were more likely to oppose taxes because they believe they already pay enough taxes.

Figure 11: Main reason for supporting or opposing the selected obesity prevention regulations by age (%)

	15-24 <sup>(a)</sup>	25-44	45-64	65 and ove
Mandatory front-of-pack nutrition labelling for packaged foods(b)				
Main reason for support (net in favour 89.7%)				
Will educate others about nutrition	56.5	55.8	57.1	53.6
Will use this information myself	37.2	31.1*	29.9*	31.5*
Will stop food industry being misleading	1.7	7.2*	7.3*	7.8*
Other reason	4.6	5.8	5.8	7.0*
Exclusion zones for new fast food outlets near schools				
Main reason for support (net in favour 62.7%)				
Will discourage people from buying unhealthy products	76.5	73.5	75.4	70.6*
Will help to improve population health and reduce obesity	14.7	12.3	14.3	18.6*
Other reason	8.8	14.2*	10.3	10.8
Main reason for opposition (net opposition 17.9%)				
Should focus on education rather than regulation	30.6	43.4*	39.2	42.8*
Will make no difference to children's diets	34.4	23.6*	35.1	25.9*
Fast food outlets should be able to build where they like	6.2	5.0	3.9	5.6
Positive aspects of fast food (like it, place to socialise, jobs)	12.3	8.0	1.3*	1.2*
Other reason	16.6	20.0	20.4	24.4*
Taxes on unhealthy high fat foods or sugar-sweetened drinks				
Main reason for support (net in favour 45.7% <sup>(c)</sup> )				
Will discourage people from buying unhealthy products	70.2	74.4	71.0	71.9
Contributes to burden of obesity on the economy	3.7	8.7*	11.9*	8.3*
Will help to drive reformulation of unhealthy products	4.2	1.1*	0.6*	1.0*
Other reason	21.9	15.8*	16.2*	18.8
Main reason for opposition (net opposition $48.9\%^{(d)}$ )				
Already pay enough taxes	18.0	29.4*	31.9*	33.6*
Should focus on education rather than regulation	26.9	20.2*	22.2*	19.1*
Will make no difference to people's diets	15.9	21.9*	15.7	19.4
This is a 'money grab' by governments	15.9	18.2	20.0	16.3
Would unfairly impact on disadvantaged people	4.9	1.7*	3.5*	0.7*
Other reason	18.4	8.6*	6.7*	10.9*

Main reason for opposition not shown as net opposition <10%

Overall, views expressed by younger respondents tended to demonstrate adoption of neoliberal self-regulatory imperatives. Approval of nutrition labelling for personal use may indicate that young people believe that obesity prevention is personally relevant, following a proliferation of policies and initiatives oriented to surveilling the fatness of young people's bodies in recent years (Rich, 2010). Interpreted in conjunction with lower levels of support for more restrictive approaches, these findings suggest that young people tend to engage with obesity through individualist neoliberal values (*cf.* Gressier, 2017).

<sup>(</sup>c) Includes those who are in favour of at least one taxation measure

<sup>(</sup>d) Includes those who oppose at least one taxation measure

Significant difference at p<0.05

Relatively higher levels of ambivalence about regulatory interventions among those in the youngest age bracket may also be explained as a factor of lower political engagement among this age group in general. However, as Vromen (2003) argues, in order to accurately understand the political views of young Australians it is necessary to reflect on the realities of their social citizenship, including socioeconomic circumstances and other structural factors. As such, secondary reasons underpinning resistance to exclusion zones (including that they provide jobs and somewhere to socialise) and taxes (including that they may unfairly impact disadvantaged people) may point to more compelling concerns in the lives of young people than obesity. Indeed, youth unemployment in South Australia (where the survey was conducted) currently stands at 15.2%; the highest in Australia (ABS, 2018). Survey findings revealing ambivalence about regulations and adoption of self-regulatory imperatives should therefore not be interpreted only as a reflection of the dominant healthist ideological climate, but should also be considered in relation to young peoples' disengagement with policy reform that is not responsive to their concerns.

### **Chapter Seven**

## The biopedagogies of preventive obesity regulations

The role of governments in addressing obesity is contentious. As Kirkland (2008, 399) has explained:

Attention to obesity instructs us in proper citizenship, stewardship of our bodies, and in what we can rightfully expect from law and the state (as well as the opposite: what we ought to do for ourselves by willpower, habituation, or good character).

This thesis has shown that these expectations derive from pervasive moral neoliberal discourses of obesity, and are enmeshed with classed and gendered norms associated with food, bodies and eating. In exploring these discursive foundations of public support for preventive obesity regulations, empirical evidence was generated to show that regulations are widely understood as a means to legitimise and enact certain knowledges about how to be healthy. I therefore argue that regulations are biopedagogies: mechanisms for imparting knowledge in order to regulate the bodies of individuals and populations in ways that align with state interests.

To conclude the thesis, this chapter summarises the key themes through a lens of biopedagogy (Wright & Harwood, 2009), with attention to the workings of truth, power, and subjectification. I then engage in a critical discussion of the role of public opinion in public health policy development to expound the implications of the research for public health practice. Lastly, I summarise the research presented in the thesis and offer suggestions for future research.

#### Key themes of the thesis

#### **Enacting knowledge through regulations**

Underpinning the biopedagogies of preventive obesity regulations are the ways in which subjectivities and relations of power are shaped in obesity discourse. Authoritative biomedical knowledges and neoliberal economic rationalities have identified and quantified obesity as a threat to the economic viability of the future nation. The adoption of these discourses across much of the public domain has created an environment in which 'the public' as a collective body are oriented to the obesity epidemic as victims, primarily defined in terms of the economic burden imposed.

Clarke (2004) has described how such neoliberal economic logics divide the collective public into the disparate identities of the tax-payer and the scrounger. This places taxes (and those who pay them) in an antagonistic relationship with 'scroungers' in receipt of government-funded services; equating taxpayers' interests with the efficient operation of government, and ruling out other social and political orientations to government-funded services. The analysis presented in this thesis shows that neoliberal obesity discourses promote a similar fracturing of the public into the subjectivities of the bio-citizen (who cares for the economic wellbeing of the nation via responsible management of their own weight and that of their family; Halse 2009), or the obese and abject economic burden. Intense and vitriolic emotions expressed about obesity operate to 'surface' (Ahmed, 2004b) these subjectivities by delineating those who are responsible and informed about obesity and those who are not. Emotive discourses affirm the power and relational

value of the bio-citizenry, enabling grievances with obesity to be articulated from a principled position.

These morally-demarcated subjectivities establish a role for regulations which impose culpability, by inciting recognition of the harms purportedly imposed by careless and uninformed personal behaviour. With obesity commonly positioned as part of an economic discourse, government obesity interventions are configured as a mechanism to protect the economic interests of the bio-citizenry. As such, obesity regulations are widely endorsed for their role in acting upon generalised Others, with little attention directed towards a role in addressing individuals' own health.

It is through these subjectification effects that regulations are established as a mechanism of social power. With contemporary neoliberal citizenship privileging the autonomous and rational pursuit of health, knowledge about health and nutrition is established as a form of cultural capital. This enabled ignorance to emerge as the dominant explanation for obesity and its socio-economic patterning. The central role of ignorance in generating public support for the use of regulations exemplifies how regulations serve a biopedagogical role through 'problem closure': support for regulations among a majority of the population is premised on the ability for the interventions to provide instruction about bodies, food, and health. This support derives from middle class reifications of the problem of obesity, for which education is rendered the most sensible solution. Demonstrating an intermingling of neoliberal logics of individualism with socioecological rationales, the pedagogical capacity of regulations is not always understood to be achieved through direct instruction: while explicitly information-based interventions (such as mandatory food labelling) achieve high support,

support for socio-ecological interventions (such as taxes) also derives from the capacity for these measures to signal appropriate and inappropriate choices. In this way, socio-ecological interventions achieve broad public support as mechanisms through which to enact knowledge, rather than for their 'libertarian paternalist' capacity to influence behaviours beyond the realm of choice.

### Obesity and socio-economic disadvantage: acknowledging target groups' views

Views about preventive obesity regulations among socio-economically disadvantaged groups, who are key target populations for obesity prevention interventions, have received little attention in the extant Australian public health literature. The research presented in this thesis has shown that socio-economically disadvantaged individuals are more likely than those in other social strata to acknowledge socio-ecological features as causes of obesity. Disadvantaged participants in the focus group study presented in Chapter Five identified a range of socio-ecological drivers as influencing higher rates of obesity in deprived areas, and this line of reasoning was manifest in the survey responses presented in Chapter Six. However, among these groups, preventive regulations viewed through a socio-ecological lens were commonly seen as punitive: with obesity framed as being caused by socio-ecological factors, over which disadvantaged groups have little control, the use of preventive obesity regulations (taxes were singled out as an exemplar) were seen as a form of punishment for being poor.

The reasons for resistance to taxes provided by disadvantaged participants illuminate the impacts that these interventions may have in social realms beyond health. Disadvantaged focus group participants described taxes as impacting on *food* not *obesity*; demonstrating the personal and immediate impacts anticipated

to be imposed by regulations, in contrast to the collective future impact expected by advantaged participants. These classed orientations illustrate the temporal incongruity inherent in efforts to improve the future wellbeing of disadvantaged groups through regulations: disadvantaged participants tended not to project themselves into collective futures marred by an obesity epidemic, and therefore tended not to view themselves as beneficiaries of regulations. The perception that preventive obesity regulations prioritise improvements of the health of the population over the more immediate quality of life concerns presenting to individuals underpinned strong resistance to taxes, and to a lesser extent, other regulatory approaches.

Support among disadvantaged groups for less restrictive regulations such as mandatory food labelling demonstrates a preference for self-regulation among this group; potentially in response to the tendency for public health discourse to telescope the obesity problem to those living in lower socio-economic areas. With accounts provided by disadvantaged participants demonstrating that ignorance about the nutritional value of 'junk' foods is unlikely to be a cause of higher rates of obesity in these areas, this support should be interpreted critically. Within the prevailing healthist culture, adopting the discourse of knowledge and informed choice that underpins labelling may enable construction of an acceptable moral identity. In contrast, agreement with the discourse of environmental determinism that underpins more socio-ecologically oriented interventions, such as taxes, may indicate admission of an inability to adopt responsibility for one's own life and health. Support for labelling among disadvantaged participants may therefore be better interpreted as a form of resistance, rather than a request for assistance.

# Implications for practice: public health advocacy and intersections of power

The examination of public views presented in this thesis reveals the importance of attending to how the social power of advantaged groups interacts with the institutional power of public health to encourage implementation of preventive obesity regulations. Ironically, these power relations, and the systems of knowledge that underpin them, mean that these interventions may deleteriously impact on those disadvantaged populations in whose name they are commonly advocated.

The highly political world of obesity prevention means that claims of public support serve as valuable currency when wielded by public health advocates. However, deploying 'public will' for advocacy renders public views unidimensional: obscuring the multiplicity of publics and social identities, each with their own interests, orientations to the use of regulations, and stake in the outcomes. This thesis has generated new knowledge about how the political feasibility of obesity regulations is enhanced by high levels of support among those in higher social strata; prompted in turn by the healthist cultural context. Advocacy claiming broad 'public support' to call for regulations works to conceal resistance identified among those in lower social strata, and thereby marginalises the views of those groups in whose name the measures are commonly advocated. The fracturing of the public into the subjectivities of the virtuous bio-citizen and the obese (or potentially obese) economic burden in dominant neoliberal discourse engenders this marginalisation, as the concerns of disadvantaged groups are regarded as 'collateral damage' (Gustafsson et al., 2011) to the hegemonic framing of obesity as a costly future burden.

Venkatapuram and Marmot (2009, 86) have argued that once a social or environmental characteristic has been linked to health, policy interventions to alleviate disparities should not be assumed to be justified:

Mitigating or manipulating the social determinants of ill-health and mortality means that there must be a redistribution of valued aspects of other social spheres. The extant literature has given little attention to the possible consequences in other non-health social spheres that would follow from transforming these causal pathways. Instead, it is always the implicit response in the social determinants of health literature that the logical social response to the identification of social determinants of ill-health is to transform them. It is important to question what criteria shall be used to evaluate if, when, and how trade-offs are made between improving inequalities in health and the functioning of other social realms.

The failure in the extant Australian public health policy literature to acknowledge or accommodate resistance identified among disadvantaged groups (to taxes in particular, e.g. Morley *et al.*, 2012; Duckett *et al.*, 2016) shows that advocacy for obesity regulations privileges expert risk knowledges over the local knowledges of target populations. This means that certain relationships with food – as part of a health discourse – are legitimised, while other relationships – as care, comfort, or reward – are denigrated. By maintaining silence around such alternate views of obesity and health, dominant power relations and systems of knowledge are reinforced, and the marginalisation of socio-economically disadvantaged groups is reproduced. This signals an injustice (*cf.* Fraser, 2007), as target populations are denied a voice in the development of policies likely to impact disproportionately upon them.

This thesis has revealed that obesity is widely read as a moral hazard, with support for obesity regulations linked to concerns about the wastefulness of economic resources. With regulations situated within a discourse of ignorance and moral culpability, dominant public views about obesity regulations propel neoliberal

discourses of personal responsibility. This is because views about regulations are interpellated into existing neoliberal healthist discourse rather than reconfiguring the discourse along the lines of public health theoretical distinctions: indeed, regulations are often taken up in the public imagination in ways that contradict their socio-ecological rationale. Interpretations of public support for obesity regulations that confuse moral judgements about obesity with concern for the health and wellbeing of obese individuals are likely to be misleading. Regulations are situated within a discourse of culpability, as the logical extension of existing behavioural public health measures which seek to enact personal responsibility for obesity. The extent to which the public rationales for the use of regulations differs from the public health rationale is problematic: with public discourse prioritising individual responsibility for obesity and silencing alternative explanations, findings from this thesis reveal that the implementation of preventive obesity regulations is likely to facilitate further stigmatisation of those who are classified as obese or 'at risk' of obesity. This is because the subject positions engendering public support for regulations rely on the obesity epidemic being understood as a threat to the Self. Arguments in the extant literature about the potential for preventive obesity regulations to help overcome concerns about the stigmatising effects of behavioural health promotion interventions are likely to be overstated.

As a corollary, findings from the studies presented in this thesis suggest that public support for regulations is already quite high. Mass education about socio-ecological determinants, as has been advocated by some public health proponents adhering to an attribution theory approach, may therefore be unnecessary to achieve public endorsement for preventive obesity regulations. Indeed, the high level of public distrust of health experts and governments identified reveals that

efforts by public health advocates to educate the public about the socio-ecological causes of obesity and the evidence base for regulations are likely to meet resistance.

#### Thesis overview

This thesis has examined public views about the use of preventive obesity regulations. A review of the literature presented in **Chapter One** demonstrates how obesity has emerged as an urgent social and political issue, with preventive regulations proposed as a potential solution. I described how these interventions are considered especially promising for addressing some of the most complex aspects of the obesity problem that existing behavioural health promotion measures have been unable to resolve. These include the intense social stigma attached to obesity, and its socio-economic patterning. With obesity framed in public discourse as a matter of individual responsibility, I explored how public resistance to these measures is commonly cited in public health literature as an important barrier to their implementation. The politically-charged obesity policy environment has driven public health efforts to identify public support, and to improve public understandings about the potential efficacy of preventive obesity regulations.

In **Chapter Two**, I detailed the theoretical framework underpinning the thesis. I described how critical public health research is concerned with examining tensions between the potential impacts of public health policy on inequities and the existing unequal distribution of social power. In reviewing neo-Foucauldian critical scholarship which examines behavioural obesity interventions, I identified a need to extend theorisation of the bio-politics of obesity to regulatory measures.

Lastly, I described how the concept of biopedagogy provides a framework for understanding how public support for preventive obesity regulations is generated in the prevailing neoliberal cultural context.

In **Chapter Three**, I described the research design and its epistemological foundations. In view of the role of power/knowledge in legitimising particular public policy approaches, I introduced the concept of problematisations as a means to explore the problem-solving paradigms underpinning public views about preventive obesity regulations. I highlighted the value of a mixed-methods approach, including observations of online interactions, focus groups, and a cross-sectional population survey, for generating nuanced insights into public views. Importantly, I described how the underlying assumptions about power and legitimate voice that underpin these methods enable insight into how the views of some social groups are marginalised in obesity policy debates.

Obesity is a site of intense social and moral opprobrium in the contemporary neoliberal climate. In **Chapter Four**, I demonstrated how this can engender public support for the use of preventive obesity regulations. Emotions circulating in dominant obesity discourse operate to shape collective bodies through processes of social abjection, in which obese people may be caricatured as threatening the common (economic and moral) good of the virtuous bio-citizenry and the state. I argued that in the prevailing neoliberal climate, governments' use of regulations is situated within a discourse of culpability, as the logical extension of existing public health measures seeking to enact personal responsibility. Implementation of preventive obesity regulations may therefore perpetuate individual responsibility obesity discourse and attendant social stigma, in tension with the explicitly socioecological rationale for these measures.

The extent to which different subjectivities are problematised in relation to obesity impacts endorsement of preventive obesity regulations among those in different social groups. In **Chapter Five**, I demonstrated that support for regulations is enmeshed with classed norms and experiences with food, health, and bodies. I argued that knowledge about health and nutrition is a permutation of cultural capital through which class distinctions are expressed. Employing Tuana's (2004, 2006) theorisation of ignorance as a manifestation of social power relations, I described a classed bio-politics of ignorance underpinning public views about obesity interventions. This positions preventive obesity regulations as a pedagogical tool, and deflects attention from the ways in which low socioeconomic groups understand obesity as a problem.

In **Chapter Six**, I applied a survey method to establish the relationship between public views about regulations and social power structures. Here, I demonstrated that support for, and particularly resistance to, regulations is distinctly both gendered and classed. Applying a sociological and gender lens, these findings were explored in terms of gendered and classed responsibilities for food provision and concerns about material constraints. This demonstrated the potential for regulations to have deleterious consequences for those social groups in the name of whose health regulations are commonly advocated.

#### Further considerations and recommendations for research

This thesis has been a necessarily pre-emptive examination of Australian public views about the potential implementation of preventive obesity regulations. The extent to which the concerns identified play out will be an important focus of further research, both in Australia if (or when) regulatory reform occurs, and with

attention to the global contexts in which regulatory measures have already been implemented.

Findings from this research underscore the importance of engagement with problematised populations, in order to generate public health policy agendas to address the concerns of these groups, and to understand how public health interventions may impact wellbeing by influencing valued aspects of life that lie beyond health. While not a central focus of this research, focus group participants from the low socio-economic area expressed a range of ideas about acceptable obesity policy agendas. Ideas discussed included investment in fresh food supply chains, restrictions on fast food upsizing and 'bargain' deals, and restrictions on supermarket loyalty program email marketing of processed foods. Engagement with the ideas of target populations may help to improve the acceptability of obesity prevention regulations, as well as identify barriers to healthy diets which need to be addressed concurrently in order to optimise the effectiveness of regulatory obesity interventions. Picking up on the findings presented in the postscript to Chapter Six, research in this area could also explore young peoples' views about obesity prevention with a view to understand how the political palatability of preventive obesity regulations is likely to change in coming decades.

The comparative aspects of this project have been generative for theorising why support for obesity interventions is patterned according to levels of socio-economic deprivation and gender. However, I was unable to address gender as a major analytical theme throughout this research, owing to the relative demographic homogeneity of focus group participants, and the anonymity of participants in the case of the media comment analysis. Further qualitative research exploring how views about preventive obesity regulations differ among

those occupying differently gendered social identities across the social gradient would provide a more complete picture of the likely impact of regulations.

As yet, we do not understand how potential regulatory measures to address obesity will impact on people who are classified as obese, beyond the assumed health benefits for future generations. This is significant in light of the findings presented in this thesis which show that public support for the use of regulations to address obesity is enmeshed with stigmatised views of obese people. Preventive obesity regulations are positioned in public discourse as evidence of governments taking a more uncompromising approach to obesity prevention, and for some, this was interpreted as inducement for weight-based discrimination. There is therefore potential that increased government attention on obesity will exacerbate the discrimination experienced by individuals classified as obese. As reducing weight stigma is an identified rationale for implementing obesity regulations, these findings warrant investigation in order to inform appropriate policy development.

Finally, the extant public health policy literature has described public will as an important influence on policy reform processes (Baker *et al.*, 2017; Carter, 2010; Chapman, 2004; Chung *et al.* 2012; Crammond *et al.*, 2013; Cullerton, 2016; Haynes *et al.*, 2011; Huang *et al.*, 2015). The mechanisms of influence are complicated by the political climate, which is shaped by the power of key stakeholder groups including policymakers, public health advocates, and industry. I suggest that critical examination of the ways in which these different stakeholder groups describe the role of public opinion in enabling or inhibiting policy reform will provide new insights into the institutional structures and relations of power which enable target groups' views to be marginalised in obesity policy reform. In doing

so, such research may open up pathways to ensure that target groups have a voice in policy reform.

#### Conclusion

Obesity has been designated 'one of the greatest public health challenges of the 21st century' (WHO, 2017). This challenge derives not only from the anticipated health impacts, but also from the political, economic, and social landscape in which prevention is practiced. This thesis has revealed that public views about obesity regulations intermix with existing policy and social contexts dominated by neoliberal healthist ideologies and economic rationalism. These systems of knowledge/power both engender understandings of regulations as tools to impose moral culpability, and marginalise socio-economically disadvantaged groups' voice in obesity policy development processes. The critique presented in this thesis reveals the necessity for collaboration with those groups most problematised in public health obesity discourse, if meaningful action on the public health's dual core values of health equity and social justice is to be achieved.

## **Appendix A: Online news article characteristics**

Article title	Source	Date of publication	Number of	URL
			comments	
What does fat discrimination look like	The Conversation	2/1/2013	95	http://theconversation.com/what-does-fat-discrimination-look-like-10247
Climate change and obesity	The Conversation	3/1/2013	9	http://theconversation.com/climate-change-and-obesity-10925
Marketing fast food as Australian not a fair go	The Conversation	7/1/2013	28	http://theconversation.com/marketing-fast-food-as-australian-not-a-fair-go-11481
Call for policymakers to consider genetic link to soft drink consumption	The Conversation	16/1/2013	6	http://theconversation.com/call-for-policymakers-to-consider-genetic-link-to-soft-drink-consumption-11670
Lap banding a long-term obesity solution	The Conversation	16/1/2013	10	http://theconversation.com/lap-banding-a-long-term-obesity-solution-study-11651
Push to tax sugary drinks to fight obesity	The Age	17/1/2013	102	http://www.theage.com.au/lifestyle/diet-and-fitness/push-to-tax-sugary-drinks-to-fight-obesity-20130116-2ctwd.html
Sweet way to go Drip feed soft drink the road to fat	Sydney Morning Herald	17/1/2013	201	http://www.smh.com.au/lifestyle/diet-and-fitness/sweet-way-to-go-dripfeed-soft-drink-the-road-to-fat-20130116-2ctsn.html
Coca-Cola part of the solution to obesity yeah right	The Conversation	17/1/2013	35	http://theconversation.com/coca-cola-part-of-the-solution-to-obesity-yeah-right-11662
All you fat bastards of the world unite and take over	Sydney Morning Herald	23/1/2013	69	http://www.smh.com.au/federal-politics/political-opinion/all-you-fat-bastards-of-the-world-8230-unite-and-take-over-20130122-2d51u.html
Shock advertisement aims to beat obesity as rise in obese patients swallows up health budget	Courier Mail	14/2/2013	31	http://www.couriermail.com.au/news/queensland/shock-advertisement-aims-to-beat-obesity-as-rise-in-obese-patients-swallows-up-health-budget/story-e6freoof-1226577467567
Another day, another anti-obesity campaign, but will this one work?	The Conversation	18/2/2013	60	http://theconversation.com/another-day-another-anti-obesity-campaign-but-will-this-one-work-11724
Obesity is preventable and doesn't happen behind our backs, especially those of our children	Courier Mail	20/2/2013	111	http://www.couriermail.com.au/news/obesity-is-preventable-and-doesnt-happen-behind-our-backs-especially-those-of-our-children/story-e6frerc6-1226582169825

Jessica Irvine reveals how to balance your body budget	news.com.au	24/2/2013	22	http://www.news.com.au/lifestyle/health/jessica-irvine-reveals-how-to-balance-your-body-budget/story-fneuz9ev-1226584166822
Junk food labelling to combat obesity crisis	Courier Mail	26/2/2013	37	http://www.couriermail.com.au/news/queensland/junk-food-labelling-to-combat-obesity-crisis/story-e6freoof-1226586399396
Many Territorians are porkers	NT News	3/3/2013	26	http://www.ntnews.com.au/article/2013/03/03/318175_ntnews.html
Ban fast food restaurants from near schools, Charles Sturt Council says	The Advertiser	4/3/2013	46	http://www.adelaidenow.com.au/news/south-australia/ban-fast-food-restaurants-from-near-schools-charles-sturt-council-says/story-e6frea83-1226589796329
Redesign Sydney's public areas to cater for exercise, fitness industry urges	Sydney Morning Herald	13/3/2013	102	http://www.smh.com.au/lifestyle/diet-and-fitness/redesign- sydneys-public-areas-to-cater-for-exercise-fitness-industry-urges- 20130313-2fzpm.html
Lessons from New York's overturned sugary drinks ban	The Conversation	22/3/2013	4	http://theconversation.com/lessons-from-new-yorks-overturned-sugary-drinks-ban-12799
Parents not setting a healthy example for their kids	The Advertiser	1/4/2013	6	http://www.adelaidenow.com.au/news/opinion/parents-not-a-healthy-example-for-their-kids/story-e6freabc-1226610433080
Young children so overweight doctors have to take out tonsils so they can breathe	The Advertiser	1/4/2013	27	http://www.adelaidenow.com.au/news/south-australia/young-children-so-overweight-doctors-have-to-take-out-tonsils-so-they-can-breathe/story-e6frea83-1226610433823
A big fat chance of a fair go for some	Daily Telegraph	8/4/2013	81	http://www.dailytelegraph.com.au/lifestyle/a-big-fat-chance-of-a-fair-go-for-some/story-e6frf019-1226614458126
Shepherd: Lose the fatuous fat pride mantra	The Advertiser	8/4/2013	35	http://www.adelaidenow.com.au/news/opinion/shepherd-lose-the-fatuous-fat-pride-mantra/story-e6freabc-1226615235797
Extreme obesity the new normal	Sydney Morning Herald	12/4/2013	132	http://www.smh.com.au/national/health/extreme-obesity-the- new-normal-20130411-2ho3h.html
'Fat fee' flies in the face of humanity	Courier Mail	17/4/2013	2	http://www.couriermail.com.au/news/fat-fee-flies-in-face-of-humanity/story-e6frerdf-1226621907290
Monday's medical myth: overweight people live longer	The Conversation	22/4/2013	15	http://theconversation.com/mondays-medical-myth-overweight-people-live-longer-12825
Health plan to put fat, sugar out of easy reach	Canberra Times	6/5/2013	25	http://www.canberratimes.com.au/act-news/health-plan-to-put-fat-sugar-out-of-easy-reach-20130505-2j1qi.html
Study to set scene for fat tax bunfight	NT News	20/5/2013	57	http://www.ntnews.com.au/article/2013/05/20/321052_lifestyle.h tml
Fat of the land: Obesity plagues the bush	news.com.au	24/5/2013	2	http://www.news.com.au/lifestyle/health/fat-of-the-land-obesity-plagues-the-bush/story-fneuz9ev-1226650243851

Fat of the land: Obesity plagues the bush	The Advertiser	24/5/2013	1	http://www.adelaidenow.com.au/news/fat-of-the-land-obesity-plagues-the-bush/story-e6frea6u-1226650243851
Health boss calls for sugar tax	Hobart Mercury	31/5/2013	40	http://prelive.themercury.com.au/article/2013/05/31/380425_tas mania-news.html
Fat taxes won't work	Hobart Mercury	9/6/2013	1	http://prelive.themercury.com.au/article/2013/06/09/381052_opi nion.html
New food labels to help beat obesity as star system proposed	The Australian	13/6/2013	40	http://www.theaustralian.com.au/national-affairs/new-food-labels-to-help-beat-obesity-as-star-system-proposed/story-fn59niix-1226662810015
Seeing stars ministers poised to approve new food rating system but industry seeks a delay	The Conversation	14/6/2013	52	http://theconversation.com/seeing-stars-ministers-poised-to-approve-new-food-rating-system-but-industry-seeks-a-delay-15163
Time to face hard truths when it comes to obese children	The Conversation	24/6/2013	1	http://theconversation.com/time-to-face-hard-truths-when-it-comes-to-obese-children-15323
Big Soda - do you think we're all stupid	The Conversation	27/6/2013	40	http://theconversation.com/big-soda-do-you-think-were-all-stupid-15324
Obesity take a pill or take the stairs	The Age	3/7/2013	55	http://www.theage.com.au/executive-style/fitness/blogs/boot-camp/obesity-take-a-pill-or-take-the-stairs-20130702-2pa8e.html
Get a good night's sleep and fight off obesity – that's the new health message	Courier Mail	5/7/2013	2	http://www.couriermail.com.au/news/opinion/get-a-good-nights-sleep-and-fight-off-obesity-thats-the-new-health-message/story-fnihsr9v-1226674522347
An overweight dad's sperm can lead to fat offspring, world-first Adelaide study shows	The Advertiser	15/7/2013	1	http://www.adelaidenow.com.au/lifestyle/parenting/an- overweight-dad8217s-sperm-can-lead-to-fat-offspring-worldfirst- adelaide-study-shows/story-fni0do1y-1226679741295
Graphic images, plain packaging on agenda in bid to combat growing obesity problem	Courier Mail	16/7/2013	10	http://www.couriermail.com.au/news/queensland/graphic- images-plain-packaging-on-agenda-in-bid-to-combat-growing- obesity-problem/story-fnihsrf2-1226679821508
Big Food won't solve the obesity crisis	Sydney Morning Herald	18/7/2013	33	http://www.smh.com.au/comment/big-food-wont-solve-the- obesity-crisis-20130717-2q4iy.html
Discrimination against fat people increases the likelihood of weight gain	The Conversation	25/7/2013	47	http://theconversation.com/discrimination-against-fat-people-increases-the-likelihood-of-weight-gain-16343
Disadvantaged kids more likely to be overweight by age four	The Conversation	30/7/2013	25	https://theconversation.com/disadvantaged-kids-more-likely-to-be-overweight-by-age-four-16526
Poverty a poor excuse for obesity	Daily Telegraph	31/7/2013	5	http://www.dailytelegraph.com.au/news/opinion/poverty-a-poor-excuse-for-obesity/story-fnh4jt60-1226688530184

Poverty a poor excuse for obesity	The Advertiser	31/7/2013	2	http://www.adelaidenow.com.au/news/opinion/poverty-a-poo excuse-for-obesity/story-fnh4jt63-1226688530184	
Greens launch policy to ban TV ads during prime time children's programs	The Advertiser	7/8/2013	6	http://www.adelaidenow.com.au/news/special-features/greens-launch-policy-to-ban-tv-ads-during-prime-time-children8217s-programs/story-fnho52jl-1226693125533	
Genetic research shows single approach to obesity won't work	The Conversation	8/8/2013	34	http://theconversation.com/genetic-research-shows-single-approach-to-obesity-wont-work-16777	
Anti-obesity app shows users their overweight future	The Conversation	12/8/2013	9	http://theconversation.com/anti-obesity-app-shows-users-their-overweight-future-16943	
Queensland towns top nation for obesity rates	Courier Mail	13/8/2013	38	http://www.couriermail.com.au/news/queensland/queensland- towns-top-nation-for-obesity-rates/story-fnihsrf2- 1226695791919?from=public_rss	
Some of our towns are the most obese in Australia but we still take it lying down - with a pie and beer at the tele	Courier Mail	15/8/2013	4	http://www.couriermail.com.au/news/opinion/some-of-our-towns-are-the-most-obese-in-australia-but-we-still-take-it-lying-down-8211-with-a-pie-and-beer-at-the-tele/story-fnihsr9v-1226697320111	
Long-term study finds Australian adults increasingly at risk of diabetes and obesity	ABC	19/8/2013	4	http://www.abc.net.au/news/2013-08-19/australian-adults-health-status/4894924	
Sugar hysteria won't solve the obesity puzzle	The Conversation	26/8/2013	1	http://theconversation.com/sugar-hysteria-wont-solve-the-obesity-puzzle-17384	
Obese man Luis Almario's legal battle prompts warning to treat obesity seriously	ABC	27/8/2013	28	http://www.abc.net.au/news/2013-08-26/overweight-man-luis-almario-legal-battle-prompts-obesity-warning/4913292	
Obesity: do you blame Maccas, or parents?	The Age	2/9/2013	133	http://www.theage.com.au/executive-style/fitness/blogs/boot-camp/obesity-do-you-blame-maccas-or-parents-20130902-2szoh.html	
Lessons for Australia from US reversal of childhood obesity	The Conversation	6/9/2013	11	http://theconversation.com/lessons-for-australia-from-us-reversal-of-childhood-obesity-17895	
Fat activists on the offensive in war on obesity	The Conversation	16/9/2013	11	https://theconversation.com/fat-activists-on-the-offensive-in-war-on-obesity-18024	
Obesity dampens the brain signal that makes us feel full	The Conversation	19/9/2013	2	http://theconversation.com/obesity-dampens-the-brain-signal-that-makes-us-feel-full-18244	
Stress test could give thousands an early warning of obesity risk	Herald Sun	19/9/2013	4	http://www.heraldsun.com.au/news/victoria/stress-test-could-give-thousands-an-early-warning-of-obesity-risk/story-fni0fit3-1226722374817	

Guilt relief: how families can fight childhood obesity	The Conversation	20/9/2013	15	http://theconversation.com/guilt-relief-how-families-can-fight-childhood-obesity-18294
Parents' role in childhood obesity targeted in \$5m PEACH program by QUT	Courier Mail	20/9/2013	6	http://www.couriermail.com.au/news/queensland/parents8217-role-in-childhood-obesity-targeted-in-5m-peach-program-by-qut/story-fnihsrf2-1226723116570
Doctors on frontline to fight fat	Hobart Mercury	3/10/2013	3	http://www.themercury.com.au/news/tasmania/docs-on-fat-fight-frontline/story-fnj4f7k1-1226731914402
Flab fight: obese Tasmanians urged to go vegan	ABC	11/10/2013	11	http://www.abc.net.au/news/2013-10-11/flab-fight3a-obese-tasmanians-urged-to-go-vegan/5016164
PETA urges residents of Dorset to fight fat by going vegan	Hobart Mercury	11/10/2013	26	http://www.themercury.com.au/lifestyle/peta-urges-residents-of-dorset-to-fight-fat-by-going-vegan/story-fnj64o6u-1226737685789
Territory to get tough on obesity	Canberra Times	14/10/2013	81	http://www.canberratimes.com.au/act-news/territory-to-get-tough-on-obesity-20131013-2vh34.html
Fat mums behind obese kids: Hopkins	NineMSN	15/10/2013	568	http://www.9news.com.au/health/2013/10/15/09/12/hopkins-offends-again-about-obese-kids
More Australians classed obese	Sydney Morning Herald	16/10/2013	63	http://www.smh.com.au/national/health/millions-more-australians-may-be-obese-study-20131016-2vmpw.html
Treat obesity like the disease cancer say experts	news.com.au	19/10/2013	19	http://www.news.com.au/lifestyle/fitness/treat-obesity-like-the-disease-cancer-say-experts/news-story/c3bae86409559d86a5c6f3564d0ff77a
Woman gives letter to 'obese' trick-or-treaters	NineMSN	31/10/2013	477	http://www.9news.com.au/health/2013/10/31/09/03/woman-sends-obese-trick-or-treaters-away-with-letter
Sugary drinks tax could swell coffers, shrink waistlines	The Conversation	1/11/2013	24	http://theconversation.com/sugary-drinks-tax-could-swell-coffers-shrink-waistlines-19719
Call to remove junk food from hospital vending machines	Hobart Mercury	8/11/2013	30	http://www.themercury.com.au/news/tasmania/calls-to-remove-hospital-vending/story-fnj9f6g1-1226732588342
Overweight US politician Chris Christie stars in 'Elephant in The Room' magazine cover	news.com.au	9/11/2013	1	http://www.news.com.au/lifestyle/health/overweight-us-politician-chris-christie-stars-in-elephant-in-the-room-magazine-cover/news-story/41afa61d90ca303d798b5f67c0911344
Too early to proclaim the end of the war on childhood obesity	The Conversation	14/11/2013	29	http://theconversation.com/too-early-to-proclaim-the-end-of-the-war-on-childhood-obesity-19975
Blame overshadows ugly truth of obesity and chronic disease	The Conversation	16/11/2013	1	http://theconversation.com/blame-overshadows-ugly-truth-of-obesity-and-chronic-disease-20282

Free or government-sponsored gym memberships needed to combat Queensland's obesity epidemic Diabetes Queensland doctor survey finds	Courier Mail	18/11/2013	5	http://www.couriermail.com.au/news/queensland/free-or- governmentsponsored-gym-memberships-needed-to-combat- queenslands-obesity-epidemic-diabetes-queensland-doctor- survey-finds/news-story/4192f0aad45069816e2dbe347b45cedd
Beating obesity, the demon within	The Age	20/11/2013	119	http://www.theage.com.au/beating-obesity-the-demon-within- 2xt03
Australia climbs in obesity rankings	NineMSN	22/11/2013	8	http://www.9news.com.au/health/2013/11/22/04/10/Australia- climbs-in-obesity-rankings
Obesity alarm for expectant mums over multiple health complications, including birth defects	Hobart Mercury	22/11/2013	1	http://www.themercury.com.au/lifestyle/obesity-alarm-for- expectant-mums-over-multiple-health-complications/story- fnj22j6r-1226732880571
Central Highlands region has most fast-food outlets per capita in Queensland	Courier Mail	1/12/2013	10	http://www.couriermail.com.au/lifestyle/health/central-highlands-region-has-most-fastfood-outlets-per-capita-in-queensland/news-story/da31fa547fc8f3df334eef465b847efb
Liberal MP Andrew Laming wanted new debate on weight when he called 'average Australian woman' overweight	Courier Mail	1/12/2013	4	http://www.couriermail.com.au/news/queensland/liberal-mp- andrew-laming-wanted-new-debate-on-weight-when-he-called- average-australian-woman-overweight/news- story/df4ac7175701944f10489366bdf61ca9
Being healthy and obese is a myth, researchers say	The Conversation	3/12/2013	5	http://theconversation.com/being-healthy-and-obese-is-a-myth-researchers-say-21092
Brisbane Fat Heffalump blogger Kath Read speaks out against online bullies	Courier Mail	6/12/2013	27	http://www.couriermail.com.au/questnews/north/brisbane-fat-heffalump-blogger-kath-read-speaks-out-against-online-bullies/news-story/f576e363ee2410e7f75845af68b58b8b?sv=108a47fd24c0ee39be446baab8b1a8b1
Healthy food labels blamed for rise in obesity as Queenslanders fall into high sugar and fat trap	Courier Mail	9/12/2013	68	http://www.couriermail.com.au/news/queensland/healthy-food-labels-blamed-for-rise-in-obesity-as-queenslanders-fall-into-high-sugar-and-fat-trap/news-story/37c68cff5780d380b03b3cf600e7e586
Most Australian adults want fast food chains like McDonald's, KFC, 'to stop sponsoring kids' sport'	ABC	12/12/2013	18	http://www.abc.net.au/news/2013-12-14/adults-want-fast-food-chains-to-stop-sponsoring-kids-sports/5156228
Opinion: Obesity on maternity ward beyond a joke when it threatens lives of mother and child	Courier Mail	21/12/2013	1	http://www.couriermail.com.au/news/opinion/opinion-obesity-on-maternity-ward-beyond-a-joke-when-it-threatens-lives-of-mother-and-child/news-story/f485b543f5a0518ad5c862d4e97265da

# Appendix B: Focus groups ethics approval THE UNIVERSITY of ADELAIDE

RESEARCH BRANCH
OFFICE OF RESEARCH ETHICS, COMPLIANCE
AND INTEGRITY

LEVEL 7, 115 GRENFELL STREET THE UNIVERSITY OF ADELAIDE SA 5005 AUSTRALIA

TELEPHONE +61 8 8313 5137 FACSIMILE +61 8 8313 3700 EMAIL hrec@adelaide.edu.au

CRICOS Provider Number 00123M

4 December 2014

Dr J Street School: Public Health

Dear Dr Street

ETHICS APPROVAL No:

H-2014-266

PROJECT TITLE:

The social acceptability of obesity prevention through law: an investigation of public attitudes and their social contexts

The ethics application for the above project has been reviewed by the Low Risk Human Research Ethics Review Group (Faculty of Health Sciences) and is deemed to meet the requirements of the *National Statement on Ethical Conduct in Human Research (2007)* involving no more than low risk for research participants. You are authorised to commence your research on **04 Dec 2014**.

Ethics approval is granted for three years and is subject to satisfactory annual reporting. The form titled *Project Status Report* is to be used when reporting annual progress and project completion and can be downloaded at <a href="http://www.adelaide.edu.au/ethics/human/guidelines/reporting">http://www.adelaide.edu.au/ethics/human/guidelines/reporting</a>. Prior to expiry, ethics approval may be extended for a further period.

Participants in the study are to be given a copy of the Information Sheet and the signed Consent Form to retain. It is also a condition of approval that you **immediately report** anything which might warrant review of ethical approval including:

- serious or unexpected adverse effects on participants,
- previously unforeseen events which might affect continued ethical acceptability of the project,
- proposed changes to the protocol; and
- the project is discontinued before the expected date of completion.

Please refer to the following ethics approval document for any additional conditions that may apply to this project.

Yours sincerely,

Sabine Schreiber
Secretary, Human Research Ethics Committee
Office of Research Ethics, Compliance and Integrity



RESEARCH BRANCH OFFICE OF RESEARCH ETHICS, COMPLIANCE AND INTEGRITY

LEVEL 7, 115 GRENFELL STREET THE UNIVERSITY OF ADELAIDE SA 5005 AUSTRALIA

TELEPHONE +61 8 8313 5137
FACSIMILE +61 8 8313 3700
EMAIL hrec@adelaide.edu.au

CRICOS Provider Number 00123M

Applicant:

Dr J Street

School:

**Public Health** 

**Project Title:** 

The social acceptability of obesity prevention through

law: an investigation of public attitudes and their

social contexts

The University of Adelaide Human Research Ethics Committee Low Risk Human Research Ethics Review Group (Faculty of Health Sciences)

**ETHICS APPROVAL No:** 

H-2014-266

App. No.: 0000019580

APPROVED for the period:

04 Dec 2014 to 31 Dec 2017

It is noted that this study is to be conducted by Lucy Martin, PhD student

Sabine Schreiber
Secretary, Human Research Ethics Committee
Office of Research Ethics, Compliance and Integrity

## Appendix C: Focus group recruitment materials

# What should the government do about obesity?







• Nothing?

THE UNIVERSITY of ADELAIDE



We are conducting a research study to understand the community's views about using laws and regulations to help people maintain a healthy weight.

If you are aged 18 years or over, you are invited to take part in a **one hour focus group** to share your views about some measures governments could use to help people maintain a healthy weight.

Focus groups will be held on **Tuesday 20 January** at the Burnside Civic Centre, 401 Greenhill Road, Tusmore (after hours sessions available).

To participate, contact Lucy Farrell on 0409 275 234, or email lucy.farrell@adelaide.edu.au

### You will receive a \$40 shopping voucher for your participation



# What should the government do about obesity?

Tax soft drinks?



- Ban junk food advertising?
- Improve nutrition labels on food?
- Nothing?

We are conducting a research study to understand the community's views about using laws and regulations to help people maintain a healthy weight.

If you are aged 18 years or over, you are invited to take part in a **one hour focus group** to share your views about some measures governments could use to help people maintain a healthy weight.

Focus groups will be held on **Friday 30 January** at the Playford Civic Centre, 10 Playford Boulevard Elizabeth (after hours sessions available).

To participate, contact Lucy Farrell on 0409 275 234, or email lucy.farrell@adelaide.edu.au

### You will receive a \$40 shopping voucher for your participation

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number H-2014-266). If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. Contact the Human Research Ethics Committee's Secretariat on phone (08) 8313 6028 or by email to <a href="https://example.ceu.au/">https://example.ceu.au/</a> (we wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant. Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

rarrell@adelaide.edu.au should the government out obesity? 275 234 farrell@adelaide.edu.au	at should the government about obesity? 99 275 234 y.farrell@adelaide.edu.au y.farrell@adelaide.edu.au at should the government about obesity? 90 275 234	about of 9 275 2 9 275 2 y.farrell at shoul about of 9 275 2 y.farrell	What should the government do about obesity? 0409 275 224 lucy,farrell@adelaide.edu.au	What should the government do about obesity? 0409 275 234 lucy.farrell@adelaide.edu.au	What should the government do about obesity? 0409 275 234 ucy.farrell@adelaide.edu.au	What should the government do about obesity? 0409 275 234 ucy farrell@adelaide.edu.au	What should the government do about obesity? do 25 234 do 25 25 24 lucy tarrell@adelaide.edu.au	What should the government do about obesity?  do 25 275 234 ucy.tarrell@adelaide.edu.au	What should the government do about obesity? 0409 275 234 lucy.farrell@adelaide.edu.au
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( ) 24 November - Add a Time?

Burnside and Playford council areas

What should Australian governments do to address obesity?

- Tax soft drinks?
- Ban junk food advertising?
- Improve nutrition labelling on processed foods?

These are some approaches that have been proposed to address increasingly high rates of obesity in Australia. There are many debates about what can be done and who should take responsibility for reducing rates of obesity. Some people believe that the government should not interfere with our private choices through measures like these. Others, however, think that the government is responsible for making sure the population is healthy.

#### What do you think?

I am conducting a series of hour-long focus groups for my PhD research to examine community views towards the use of laws and regulations to address obesity. I am looking for people aged 18 years and over who reside in the Burnside or Playford council areas to take part.

If you take part, you will recieve a \$40 shopping voucher for your participation.

Unfortunately, you won't be able to participate if I know you personally, but please share this invitation with anybody you know who you think may be interested in participating.

To take part, please contact Lucy Martin on 8313 0648 during office hours, or email lucy.martin@adelaide.edu.au

## Appendix D: Focus group participant information materials



### PARTICIPANT INFORMATION SHEET

**PROJECT TITLE:** The social acceptability of obesity prevention through law: an investigation of public attitudes and their social contexts

PRINCIPAL INVESTIGATOR: Dr Jackie Street

STUDENT RESEARCHER: Lucy Farrell STUDENT'S DEGREE: PhD (Public Health)

Dear Participant,

You are invited to participate in the research project described below.

#### What is the project about?

Obesity is becoming more common in Australia and it ultimately leads to disease and poorer quality of life. There are many debates about what can be done and who should take responsibility for reducing rates of obesity. How should governments respond to this challenge? For example, should governments ban junk food advertising during children's television, introduce a tax on soft drinks, or enforce better labelling on packaged foods? The public debate around these issues is often polarized with some people thinking that the government should not interfere and intrude into our private lives. Others, however, think that the government is responsible for making sure that the population is healthy.

For this research, we want to speak with members of the community to understand their views on what role laws and regulations should play in addressing obesity. We are also interested in whether where you live, or whether you have children, plays a role in your reasons for thinking that using laws and regulations to address obesity is acceptable or unacceptable.

#### Who is undertaking the project?

This project is being conducted by Lucy Farrell. This research will form the basis for the degree of PhD (Public Health) at the University of Adelaide under the supervision of Dr Jackie Street, Prof Vivienne Moore, and A/Prof Megan Warin. The research is funded by a grant from the Australian National Preventative Health Agency.

#### Why am I being invited to participate?

We are interested in speaking to a range of people to get their views regarding laws and regulations for preventing obesity. You have been sent this information as you contacted the researchers to express an interest in participating.

#### What will I be asked to do?

You will be asked to take part in a small group discussion known as a focus group in which we will ask your views about using regulations and laws to address obesity in Australia. We are interested in discussing your opinions, and you do not have to know anything about laws and regulations to take part. It is important to remember that there are no right or wrong views. We are simply interested in your views.

The discussion session will be convened by an experienced researcher, and will be digitally audio recorded and typed for us to study. The only people who will be able to listen to the recording or read the transcript are the student researcher (Lucy Farrell) and her supervisors. We will keep your identity private and will not use your name in the transcripts or in any papers that we write during the study.

#### How much time will the project take?

The focus group discussions will take one hour. You will receive a \$40 Coles Myer to reimburse you for your time.

#### Are there any risks associated with participating in this project?

Weight can be a sensitive issue for some people. It is possible that, during the discussions, issues relating to body weight and obesity might be raised that are uncomfortable for you. The researchers will intervene if the conversation appears to be uncomfortable for any of the participants. You are also entirely free to withdraw from the discussion at any time.

#### What are the benefits of the research project?

This study will provide information about the public acceptability of laws and regulations for obesity prevention. While this information may be used to inform the development of policies in the future, your involvement may not be of any direct benefit to you.

#### Can I withdraw from the project?

It is completely up to you whether or not you take part in the study. You are entirely free to withdraw your permission to be involved, up to and including the day of the focus group. You may also refuse to answer any of the questions posed to the group. However, please be aware that once you have participated in the discussion and choose to withdraw during the discussions, we will be unable to delete your conversation from the recording and meeting transcripts.

#### What will happen to my information?

Access to all research data, including the recordings of the discussions and transcripts will be limited to only the student researcher (Lucy Farrell) and her supervisors. The data will be stored for seven years in a lockable office on a password protected computer.

You will be asked to introduce yourself at the start of the session using only your given name. Your full name will not be made known to other participants. You will not be asked to divulge any other personal information. In any publications arising from this research, you will not be referred to by name.

This study is expected to be completed by the middle of 2015. A summary of the research findings will be emailed to you if you wish.

#### Who do I contact if I have questions about the project?

If you have any questions about participating in this research, contact:

Dr Jackie Street (08 8313 6498, jackie.street@adelaide.edu.au)

Ms Lucy Farrell (08 8313 0648, lucy.farrell@adelaide.edu.au)

Prof Vivienne Moore (08 8313 4605, vivienne.moore@adelaide.edu.au)

A/Prof Megan Warin (08 8313 4864, megan.warin@adelaide.edu.au)

#### What if I have a complaint or any concerns?

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number H-2014-266). If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the Principal Investigator. Contact the Human Research Ethics Committee's Secretariat on phone (08) 8313 6028 or by email to hrec@adelaide.edu.au. If you wish to speak with an independent person regarding concerns or a complaint, the University's policy on research involving human participants, or your rights as a participant. Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

#### If I want to participate, what do I do?

The researchers will contact you in two to three days to confirm whether you want to participate, and will provide details of the location and time of the focus group discussion. You will be asked to **complete and sign** the attached **Consent Form** prior to your participation in the focus group discussion.

Yours sincerely,

Dr Jackie Street, Ms Lucy Farrell, Prof Vivienne Moore, and A/Prof Megan Warin

## The University of Adelaide Human Research Ethics Committee (HREC)



#### CONSENT FORM

1. I have read the attached Information Sheet and agree to take part in the following research project:

Title:		The social acceptability of obesity prevention through law: an investigation of public attitudes and their social contexts			
	Ethics Approval	H-2014-266			

- 2. I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.
- 3. I have been given the opportunity to have a member of my family or a friend present while the project was explained to me.
- 4. Although I understand that the purpose of this research project is to improve the quality of health policy in Australia, it has also been explained that my involvement may not be of any benefit to me.
- 5. I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.
- 6. I understand that I am free to withdraw from the project at any time.

7. I agree to the interview being audio/video recorded.	Yes 🗆	No [

8. I am aware that I should keep a copy of this Consent Form, when completed, and the attached Information Sheet.

### Participant to complete:

Name: Date:		
Researcher/Witness to complete		
I have described the nature of the	e research to:	(print name of participant)
and in my opinion she/he underst	ood the explan	ation.
Signature: Date:	_ Position:	





This document is for people who are participants in a research project.

## CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

Project Title:	The social acceptability of obesity prevention through law: an investigation of public attitudes and their social contexts
Approval Number:	H-2014-266

The Human Research Ethics Committee monitors all the research projects which it has approved. The committee considers it important that people participating in approved projects have an independent and confidential reporting mechanism which they can use if they have any worries or complaints about that research.

This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (see <a href="http://www.nhmrc.gov.au/publications/synopses/e72syn.htm">http://www.nhmrc.gov.au/publications/synopses/e72syn.htm</a>)

1. If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator:

Name:	Dr Jackie Street
Phone:	08 8313 6498

- 2. If you wish to discuss with an independent person matters related to:
  - making a complaint, or
  - raising concerns on the conduct of the project, or
  - the University policy on research involving human participants, or
  - your rights as a participant,

contact the Human Research Ethics Committee's Secretariat on phone (08) 8313 6028 or by email to <a href="mailto:hrec@adelaide.edu.au">hrec@adelaide.edu.au</a>

### Appendix E: Focus group materials

#### Focus group schedule

- consent process
- recording of interview
- publication process
- measures in place to ensure confidentiality
- one at a time

#### Problem of obesity:

I'd like to start by getting your views about obesity in Australia.

#### **Prompts:**

Do you think that obesity is or isn't a problem?

What kind of problems associated with obesity are you concerned about?

When you think about obesity, who do you think of it as a problem for?

 (Probe for consideration of childhood obesity vs obesity in whole of population, other population sub-groups)

Why do you think the 'obesity problem' has happened? Probe for:

- Obesogenic environment explanations
- Individual explanations draw out reasons e.g. lazy, bad parenting, understanding about nutrition
- Genetic factors
- Is it a generational issue?

Whose role is it to address obesity? What do you think that role should be?

- Individuals/parents
- Big business /supermarkets etc.
- Government

#### Regulations to address obesity:

One approach that some people have proposed to address obesity is governments using 'regulations'.

By 'regulations', I mean *rules* or *laws* that the government puts in place that assist people to eat healthy or do more physical activity.

So some sorts of regulations that you might have heard about are things like banning junk food ads on children's TV, or a tax on soft drinks.

Today we are interested in your opinion on using *regulations* - that direct either people or companies to act in a certain way - to address obesity, instead of providing *information* or *education* to people to tell them how to eat and how much to exercise, like ad campaigns or dietary/physical activity guidelines.

#### **Prompts:**

In general, do you think using regulations to address obesity a good idea?

What reasons do you think the government might have for wanting to use regulations to address obesity?

Regulations would impact not only people who are obese, but people who aren't obese too. Is that fair?

Let's talk about some specific regulations. What about ...?

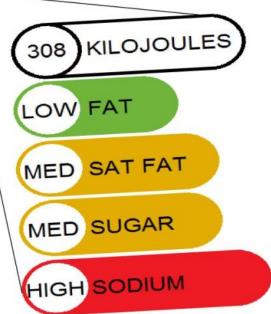
- Do you support/not support this regulation?
- Why do you support/not support that regulation?
- Do you think it would work? (Note reaching here for a discussion about effectiveness, as well as about trust in governments to properly implement)
- Can you think of any harms that might result from this regulation? Does this concern you? (Note – try to pull out ethical concerns)

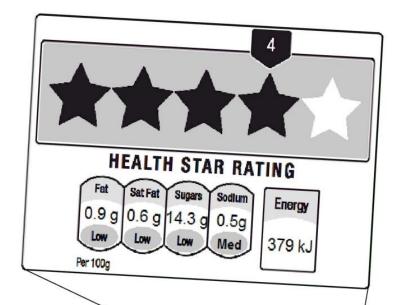
List of possible specific regulations

List of possible specific regulations	
Theme	Specific regulatory approaches
Provide information about	Food labelling (traffic light or star rating)
food/drinks	Label menus with kilojoule counts
Limit serving sizes	Restrictions on how large soft drink cups can be
Ban advertising of junk	To children
food/drinks	To adults
	On TV
	In association with sporting events
	Altogether
Ban fast food sponsorship for	For children
sporting events/programs	For adults
Tax products on basis of fat/sugar	Soft drinks / sports drinks / energy drinks
content	Fruit juices
	Fast foods
	Chocolate, cakes, biscuits, sweets etc.
	All processed foods and drinks
	Only if tax subsidises cost of healthy food
Reformulate food	Reduce sugar or fat content in processed foods
Restrict location of fast/processed	<ul> <li>Prohibit fast food near schools, childcare centres,</li> </ul>
food outlets	kindergartens etc.
	Prohibit new fast food developments in areas that
	have high rates of obesity
Bans on individual buying power	Ban children from buying certain types of food
	<ul> <li>Require welfare payments only be spent on healthy foods</li> </ul>

Is there anything you think I have missed? Is there anything else you would like to say?











The Average Adult Daily Energy Intake is 8700kJ

### Participant characteristics questionnaire

My age		
am	Male / Female	
am	Not a parent	
	A parent / step-parent / primary caregiver of child(ren) aged 9 or under of child(ren) aged 10 to 15 of child(ren) aged 16 or 17 of adult child(ren)	
	A grandparent of child(ren) aged 9 or under of child(ren) aged 10 to 15 of child(ren) aged 16 or 17	0 0 0
	of adult grand child(ren)	

## Appendix F: Survey questionnaire and prompt cards

IN CONFIDENCE

Interview	Number	Γ		l

# SA HEALTH OMNIBUS SURVEY SPRING 2014

Good..., my name is ... from Harrison Health Research. We are conducting a survey on behalf of The University of Adelaide and a range of health organisations in South Australia.

You should have received a letter which explains the background to the survey in more detail.

In this survey we are speaking to people aged 15 and over

If there is more than one person in the household aged 15 or over, we are asked to speak to the person who was last to have a birthday. This is to ensure we interview a representative cross-section of the community.

Could I please speak with the person whose birthday was last?

This survey is voluntary and you are free to withdraw at any time. I would like to assure you that your individual responses will remain confidential and you are not required to answer any questions that you are not comfortable with.

Your answers will be used for health planning purposes and will assist in improving the health of all South Australians.

If the respondent is not available or doesn't have time at present, please establish a definite appointment time to call back which suits the respondent.

Interviewer: Record starting time of interview (24 Hour Clock)

Please record sex

1 Male

2 Female

As health is often age related may I commence by asking your age?

Including yourself, how many people aged 15 or over are there in your household?

If respondent aged 15-17 are parents agreeable?

1 Yes

2 No

#### A. ARTHRITIS

[questions omitted]

#### B. DIABETES/ASTHMA

[questions omitted]

#### C. HEIGHT/WEIGHT

[questions omitted]

#### D. PARTNERS IN HEALTH SCALE

[questions omitted]

#### E. SUGAR SWEETENED BEVERAGES

[questions omitted]

#### F. PA/VITAMIN D/DIET

[questions omitted]

#### G. WEIGHT CONTROL

[questions omitted]

#### H. SMOKING

[questions omitted]

#### I. ALCOHOL

[questions omitted]

#### J. RISK PERCEPTIONS

[questions omitted]

#### K. SUN PROTECTION/POLICY

[questions omitted]

#### L. MENTAL HEALTH

[questions omitted]

#### M. FOBT

[questions omitted]

#### N. TELECOMMUNICATIONS

[questions omitted]

#### O. HEALTHY FOOD LAWS

Now I'd like you to tell me your opinion on some ways the government could help people eat healthier foods.

O1 Are you in favour or against government stopping fast food chains like McDonalds, KFC or Hungry Jacks from being built near schools?

If required: Say, within walking distance for a child.

Show prompt card O1

- 1 Strongly against
- 2 Somewhat against
- 3 Neither in favour or against
- 4 Somewhat in favour
- 5 Strongly in favour
- 6 Don't know
- 7 Refused

- O2 What is the main reason why you [don't] think government should stop fast food chains being built near schools?
  - 1 Children can't leave school during school hours anyway
  - 2 It won't make any difference to the amount of fast food children eat
  - 3 Lots of other shops close to school will still sell unhealthy food and drinks
  - 4 This isn't something for government to be involved in
  - 5 People/parents have the right to choose what they/their children eat
  - 6 Fast food chains have the right to build where they like
  - 7 Stop temptation/easy access
  - 8 Will help stop obesity
  - 9 Other (specify).....
  - 10 Don't know
  - 11 Refused
- O3 Are you in favour or against government making food companies put a label, like these Show prompt card O2, on the front of food and drinks to show how healthy they are? Show prompt card O1
  - 1 Strongly against
  - 2 Somewhat against
  - 3 Neither in favour or against
  - 4 Somewhat in favour
  - 5 Strongly in favour
  - 6 Don't know
  - 7 Refused

- O4 What is the main reason why you [don't] think government should make food companies put a health rating on food?
  - 1 It won't make any difference to people's behaviour
  - 2 There is enough health information on food and drink packaging already
  - 3 I don't trust the government to do this properly
  - 4 Food companies should be allowed to package their products as they wish
  - 5 To educate others/help others make healthy choices
  - 6 To help me know what I am eating
  - 7 Stop companies from being misleading
  - 8 Other (specify) ......
  - 9 Don't know
  - 10 Refused
- O5 Are you in favour or against government taxing unhealthy foods that are high in fat? Show prompt card O1
  - 1 Strongly against
  - 2 Somewhat against
  - 3 Neither in favour or against
  - 4 Somewhat in favour
  - 5 Strongly in favour
  - 6 Don't know
  - 7 Refused

Sugary drinks or sugar-sweetened beverages are non-alcoholic water based drinks with added sugar, including soft drinks, energy drinks, fruit drinks, sports drinks and cordial.

- O6 Are you in favour or against government taxing drinks that are high in added sugar? Show prompt card O1
  - 1 Strongly against
  - 2 Somewhat against
  - 3 Neither in favour or against
  - 4 Somewhat in favour
  - 5 Strongly in favour
  - 6 Don't know
  - 7 Refused
- O7 What is the main reason why you [don't] think government should tax unhealthy food and drinks that are high in fat or added sugar?
  - 1 It won't make any difference to people's behaviour
  - 2 People/parents have the right to choose what they/their children eat
  - 3 Already pay enough taxes
  - 4 Just a way for government to make money
  - 5 Discourages people from buying unhealthy food and drinks
  - 6 Contributes to the costs of obesity on the economy
  - 7 Other (specify) ......
  - 8 Don't know
  - 9 Refused

In 5 in O5 **and** in O6 Go to O9

- O8 Would you be more in favour of a tax on unhealthy food and drinks if the money raised was used to make healthy food cheaper?
  - 1 Yes
  - 2 No
  - 3 Don't know
  - 4 Refused

Now I'd like you to tell me whether you agree or disagree with some statements about a range of issues to do with society and government, in general.

- O9 Government programs that help disadvantaged people, discourage those people from helping themselves. Show prompt card O3
  - 1 Strongly disagree
  - 2 Somewhat disagree
  - 3 Neither agree nor disagree
  - 4 Somewhat agree
  - 5 Strongly agree
  - 6 Don't know
  - 7 Refused
- O10 If you work hard and are determined, you will succeed in life. Show prompt card O3.
  - 1 Strongly disagree
  - 2 Somewhat disagree
  - 3 Neither agree nor disagree
  - 4 Somewhat agree
  - 5 Strongly agree
  - 6 Don't know
  - 7 Refused

# O11 Protecting people's health should be government's top priority, even if it hurts the economy. Show prompt card

- 1 Strongly disagree
- 2 Somewhat disagree
- 3 Neither agree nor disagree
- 4 Somewhat agree
- 5 Strongly agree
- 6 Don't know
- 7 Refused

# O12 Government are too strongly influenced by the food industry to make laws about unhealthy food. Show prompt card O3.

- 1 Strongly disagree
- 2 Somewhat disagree
- 3 Neither agree nor disagree
- 4 Somewhat agree
- 5 Strongly agree
- 6 Don't know
- 7 Refused

#### P. CARERS

[questions omitted]

#### Q. TRAFFIC LIGHT

[questions omitted]

#### R. PSYCHOLOGICAL SAFETY CLIMATE

[questions omitted]

#### Z. DEMOGRAPHICS

Now just a few general questions to finish.

#### Z1 In which country were you born?

- 1 Australia
- 2 UK and Ireland (Go to Z.3)
- 3 Italy (*Go to Z.3*)
- 4 Greece (Go to Z.3)
- 5 Holland (Go to Z.3)
- 6 Germany (Go to Z.3)
- 7 Other European (Go to Z.3)
- 8 New Zealand (Go to Z.3)
- 9 African country (Go to Z.3)
- 10 Asian country (Go to Z.3)
- 11 South America (Go to Z.3)
- 12 North America (Go to Z.3)
- 13 Oceania (Go to Z.3)
- 14 Other (specify) (Go to Z.3)

.....

## Z2 Are you of Aboriginal or Torres Strait Islander origin?

- 1 No
- 2 Aboriginal
- 3 Torres Strait Islander
- 4 Both
- 5 Don't know

#### Z3 What is your marital status?

- 1 Married
- 2 De Facto
- 3 Separated/Divorced
- 4 Widowed
- 5 Never married

### Z4 Which of these best describes your household?

- 1 A family with a child or children with both biological or adoptive parents
- 2 A step or blended family
- 3 A sole parent family
- 4 Shared care parenting
- 5 Adult living alone
- 6 Adult living with partner and no children
- 7 Related adults living together
- 8 Unrelated adults living together
- 9 Other
- 10 Refused

## Z5 Which of these groups best describes the highest qualification you have obtained?

- 1 Still at school Go to Z7
- 2 Left school at 15 years or less
- 3 Left school after age 15
- 4 Left school after age 15 but still studying
- 5 Trade qualification/apprenticeship
- 6 Certificate/Diploma one year full time or less
- 7 Certificate/Diploma more than one year full time
- 8 Bachelor degree or higher

## Z6 What kind of work have you done for most of your life?

Interviewer: Please specify fully (eg if response is Nurse, ask what type eg Enrolled, Registered etc. Please put as much detail as possible

.....

## Z7 The next question is about housing. Is this dwelling..?

- 1 Owned or being purchased
- 2 Rented from Housing SA
- 3 Rented privately
- 4 Community housing
- 5 Retirement Village
- 6 Other (specify).....
- 7 Don't know
- 8 Refused

I would now like to ask about your household's income. We are interested in how income relates to lifestyle and access to health services.

- Z8 Before tax is taken out, which of the following ranges best describes your household's income, from all sources, over the last 12 months? Show prompt card Z3
  - 1 Up to \$12,000
  - 2 \$12,001 \$20,000
  - 3 \$20,001 \$30,000
  - 4 \$30,001 \$40,000
  - 5 \$40,001 \$50,000
  - 6 \$50,001 \$60,000
  - 7 \$60,001 \$80,000
  - 8 \$80,001 \$100,000
  - 9 \$100,001 \$120,000
  - 10 \$120,001 \$140,000
  - 11 \$140,001 \$160,000
  - 12 \$160,001 \$180,000
  - 13 \$180,001 or more
  - 14 Not stated

#### Z9 What is your post code?

[questions omitted]

## Prompt card O1

238	1	2	3	4	5
	Strongly against	Somewhat against	Neither in favour nor against	Somewhat in favour	Strongly in favour

#### Prompt card O2 DAIRY MILK (2240) KILOJOULES HIGH FAT **HEALTH STAR RATING** 308 KILOJOULES 0.9 g 0.6 g 14.3 g 0.5g Low Low Low HIGH SAT FAT LOW FAT HIGH SUGAR MED SAT FAT HIGH SODIUM MED SUGAR HIGH SODIUM \*\*\* Each 100g contains MED LOW Salt Sat Fat MED 0.55 9 Fal 0.19 Sugar Kilojoules 0.49 9.09 1600 0.3% of your guideline daily amount 20% KJ 1810 sat fat total sugars 30.8 g 8.49

## Prompt card O3

	1	2	3	4	5
240	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree

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