An ethical analysis of obesity, weight stigma, and public health.

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Abstract

Rates of obesity have increased significantly over the last thirty years in both adults and children, as have rates of associated chronic diseases such as type II diabetes mellitus and cardiovascular diseases. As scholarly and political attention turns to addressing the prevalence of obesity and associated diseases, it also turns to examining ethical issues, especially when seeking to justify different policies. Recent research has yielded much discussion of certain ethical issues such as responsibility, autonomy, paternalism, harm, and more specifically, the problem of weight stigma.

An ethical issue not previously discussed is the government's very identification of obesity as a public health concern. The governments of Western democratic countries such as Australia and the United States of America continually identify obesity as a public health concern in press releases and policies. In this thesis, I argue that this identification constitutes an action that itself requires ethical justification. I propose several criteria that ought to be met to provide ethical justification whenever the government identifies a public health concern, and I focus on obesity as a case study. I conclude that the government was not ethically justified in identifying obesity as a public health problem. This is largely because evidence suggests that there is very little that can be done to effectively reduce obesity rates, and because of the creation and perpetuation of harm that resulted from this identification, particularly relating to weight stigma.

Obesity is deeply stigmatised and, as noted by many authors, weight stigma has the capacity to negatively impact physical and mental health, to perpetuate obesity, and to worsen social harms (e.g. increasing social isolation and discrimination). In turn, this negatively affects areas of a person's life such as self-esteem, academic achievement, employment opportunities, income, and health. Given this, it is of great importance that the stigmatisation of obesity and weight be considered seriously.

Within the academic literature that theorises about weight stigma and studies its impact, there are a range of approaches regarding how weight stigma ought to be dealt with. Although there is a growing voice in the literature calling for interventions to reduce weight stigma, the few reported interventions have been largely unsuccessful. In this thesis, I develop

a *spectrum* to categorise these approaches, identifying and discussing nuanced variances between each position along the spectrum. I demonstrate that weight stigma ought to be combatted directly, and provide suggestions for weight stigma-reducing interventions. Finally, I develop a *matrix* that may be useful in targeting the mechanisms by which weight stigma is understood to operate.

Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or 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 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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Signed:

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I dedicate this work to my late auntie Linda. She was an incredible woman who, in the face of unimaginable adversity, persevered nonetheless with grace, good humour, and absolute determination. I learnt a great deal from her, and miss her deeply.

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Introduction

A few months into my post-graduate research, I was sitting in a local food court when I witnessed what I now know to be a subtle, yet discernible, enactment of weight stigma. I was seated with a view of several take-away eateries, most of which were fast food restaurants such as McDonald's™ and K.F.C.™ In the queue at McDonald's was a family of four. Both parents were visibly overweight, though not to a degree that warranted special attention, while both children looked to be of a healthy weight and happy. The family was not what initially drew my attention; it was the young twenty-something couple that stood behind it. What I noticed was a series of sideways glances between the couple that, despite sitting across the food court, I could clearly understand: "What are *they* doing here?" The couple had an entire conversation without saying a word—the judgement and message were clear. "*Those* people should not be here … *those* people should not be eating McDonald's!"

This seemingly insignificant exchange spurred my interest, as the injustice of the evident judgement resonated. What made it acceptable for the young couple to be having McDonald's for lunch, yet not the family ahead of them? Is it not terribly unfair to condemn some, but not others, when they are engaging in the same behaviour? Unlike forms of stigma and discrimination related to race, gender, or sexual orientation, for example, the stigmatisation of obesity seems to be still tolerated, still socially acceptable. In some instances, it is endorsed, encouraged, and blatant. For example, consider the way in which overweight and obese contestants are portrayed and treated on the reality television show, 'The Biggest Loser'™: obesity is regularly depicted to be the result of personal failings such as laziness or gluttony, for which the contestants are held responsible and chastised. Even though other forms of stigma and discrimination are no longer tolerated and deemed morally unacceptable, the same shift does not appear to be occurring in the case of obesity, because I can easily imagine strangers feeling confident enough to exchange those glances.

Weight stigma helps to bring about a range of physical, psychological, and social harms, and that it even perpetuates obesity via the increased risk of disordered eating and avoidance of physical activity (Brewis 2014; Puhl & Brownell 2001). Weight stigma is harmful to those who are perceived (by themselves or others) to be overweight or obese, even in instances when they are not carrying excess weight. In this thesis, I review evidence that demonstrates how

weight stigma presents a serious threat to health and well-being, and I argue that it is morally imperative to combat weight stigma directly, given the known harms it produces and perpetuates.

Setting the scene: What we need to know to combat weight stigma

In considering how to combat weight stigma, it is first helpful to understand the issue of obesity and how obesity has been construed as a problem.

Obesity rates in adults and children have risen significantly in the last thirty years, as has the perception that these rates of obesity are problematic, indicated by the use of phrases such as "the war on obesity", "obesity epidemic", "battle of the bulge", "obesity crisis", and so on (Bogart 2013; Boulos et al. 2012; Callahan 2013; Ebbeling et al. 2002; Government 2009; Hilbert et al. 2008; Lagerros & Rössner 2013; Manger et al. 2012; Magnusson 2008; Procter 2007). The belief that obesity rates are worrisome is based on evidence of the associations between, on the one hand, overweight and obesity and, on the other, co-morbidities and chronic diseases such as cancer, cardiovascular disease, type II diabetes, musculoskeletal conditions, and psychosocial disorders (Ebbeling et al. 2002; Nuffield Council on Bioethics 2007; ten Have et al. 2012).

Before moving on, it is helpful to canvass the science of obesity or, broadly speaking, relevant facts. First, 'overweight' and 'obesity' are scientific classifications. A person's body mass index (BMI) score and age determines whether they are classified as overweight or obese. In adults, a 'healthy' BMI ranges from ≥18.525kg/m² and ≤24.925kg/m², with a BMI score of ≥ 25kg/m² indicating overweight and a BMI score of ≥30kg/m² indicating obesity. Second, the causes of obesity are many and they appear to interact in complex ways. For example, contributing factors include (but are not limited to) genetic and biological features, sleep patterns, aspects of the physical environment, socioeconomic status, and cultural upbringing, values and traditions (Magnusson 2010; Rawls 1990; Stanton 2009; ten Have et al. 2011).

In recognition of the adverse health consequences with which obesity is associated, numerous intervention styles have been proposed, developed, and implemented by different governments to address rising rates of obesity. This is most often undertaken in Western, industrialised, democratic countries—such as the United States, Australia, and some

European countries—and within a public health frame, whereby public health policy is introduced in attempt to reduce population rates of obesity. Examples of these interventions include: BMI report cards for children (Jacobson et al. 2009; Kersh et al. 2011); menu calorie/kilojoule labelling (Kersh et al. 2011); initiatives that encompass health promotion and obesity prevention such as EPODE (Ensemble Prévenons l'Obésité Des Enfants': *EPODE*, Together Let's Prevent Childhood *Obesity*) and Obesity Prevention and Lifestyle (OPAL) (Bell et al. 2016; Borys et al. 2012); taxes on junk foods and sugary beverages (Bogart 2013); and the restriction of food marketing to children (Dutton et al. 2012). However, on a global scale, there has been no national success in the reduction of obesity rates (Ng et al. 2014). As such, obesity continues to be considered a significant problem for public health.

Within the academic literature, obesity is predominantly discussed through the lens of prevention efforts and public health strategies for achieving weight loss, with references typically made to associated diseases and chronic conditions. In this thesis, I take a different approach. Rather than assuming obesity is the problem that requires a solution, I critically analyse the identification of obesity as a public health problem, recommend alternative links in the causal chain for public health policy to focus on, and develop tools that may assist in the development and implementation of public health policy.

Ethical frameworks have been developed to provide guidance on public health policy, including policy aimed to address obesity (Kass 2001; Kersh et al. 2011; Tannahill 2008; ten Have et al. 2012). These frameworks highlight the importance of considering ethical issues that include: the complexities of responsibility; the infringement of personal liberties and paternalism; equality of treatment, benefits, and burdens; and unintended adverse consequences, namely harms. One issue that has received little attention is the question of whether the government was ethically justified in identifying obesity as a public health problem in the first place. As I go on to argue in chapter one, the government's identification of a public health concern constitutes an action that itself requires ethical justification, and this ethical justification is lacking in the case of obesity, partly because the government's identification of obesity as a public health concern has been harmful.

When considering any kind of government action, careful thought ought to be given to the possibility that unintended harms may result. Harm takes many forms, including physical, psychological, and even financial forms. Moreover, harm may occur intentionally or unintentionally. It should be noted that not *all* harms ought to be avoided completely. For example, consider clinicians providing vaccination against influenza. The intended physical harm of being injected with a syringe is significantly outweighed by the benefit that the vaccine provides. However, government messages and public health policy may produce significant unintended harms, such as psychological suffering, and these harms can be far more ethically contentious. Central to this issue is the question of when it is justifiable to cause harm if doing so produces a wider benefit. Additionally, considerations regarding precisely who is harmed and who is benefitted are ethically significant. I examine these issues in detail in chapter one.

The government's identification of obesity as a public health problem expresses an attitude about what the problem 'is', and who bears responsibility for not only causing the problem but also solving it. Obesity is overwhelmingly misunderstood to be the result of individual failings, such as a lack of discipline or self-control (Dejong 1980). Such misunderstandings can contribute to and shape public health policy, which may then be ineffective and harmful. For example, many public health campaigns focus on individual weight loss to promote healthier lives, thereby linking weight with health. For instance, a programme titled 'LiveLighter' was developed in Western Australia to reduce rates of obesity, and it included a campaign series about 'grabbable guts'.[1] The programme focussed on the point that if you could grab a handful of your own skin, your gut, then there was reason to believe you were at risk of carrying 'toxic fat'.[2] Billboards and television advertisements depicting people engaging in particular behaviours, such as drinking soft drink, grocery shopping, and eating junk food, combined with graphic images of internal organs, were utilised with the intention of shocking and disgusting viewers. Captions such as "Grabbable gut outside means toxic fat inside" were also part of the campaign series. This is problematic for several reasons, including the fact that there is no such thing as 'toxic fat'; the fat the campaign refers to is technically visceral

[1] https://livelighter.com.au/About/
[2] https://livelighter.com.au/The-Facts/About-Toxic-Fat

fat. The use of words such as 'toxic' may alarm and distress viewers, especially given the rudimentary method of determining your 'risk' (i.e. grabbing a handful of gut).

A focus or emphasis on *weight* as an indicator of *health* will oversimplify and conflate these two distinct concepts, leading to mixed and misleading messages. For example, messages may communicate that to be 'healthier', obese and overweight individuals need to lose weight, and that non-overweight and non-obese individuals ought to prevent weight gain—but this is not true in all cases. By contrast, improvements to cardiovascular health, for example, will have a positive impact on overall health, regardless of whether there are corresponding changes to weight. Linking health and weight also promotes the misconception that non-overweight people are inherently healthy and overweight people are inherently unhealthy, irrespective of individual eating and exercise habits (O'Dea 2010).

As a result of internalising false or misleading information, individuals can develop diminished understandings of health, which may then foster or promote unhealthy behaviours such as disordered eating or exercising to excess (O'Dea 2010). This is particularly problematic in the context of childhood obesity. Children are susceptible to the decisions and actions of their parents, as they advocate for and act on their children's behalf. If parents act on the basis of false or inaccurate information, their children may suffer as a result. In addition, internalising misleading information may contribute to children developing into less autonomous adults or, more specifically, prove detrimental to their self-efficacy. If children believe that their weight is within their control and yet fail in their attempts to change it, they may lose the ability to see themselves as in control of their life and choices. Not only would this be psychologically distressing but it would negatively impact on the development of their autonomy: if you do not perceive yourself as being in control, you are less likely to demonstrate and develop autonomy – the capacity for self-determination.

Additionally, weight stigma is itself another example of the harm that can result from the government's identification of obesity as a public health problem. The very identification of obesity as a problem can be stigmatising, however risks of stigmatisation could be lessened by the government focussing on components of the food industry, or shortcomings of the built environment that function to restrict physical exercise. A shift in focus from individual behaviours is a promising step in the reduction of stigmatisation as it moves away from *individuals:* people are less likely to be stigmatised when individual behaviours, such as

dietary choices, are not the focus of health policy. Public health policy perennially risks creating or exacerbating stigma, and indeed this has proven to be a complex ethical problem for a range of health issues, including HIV/AIDS, mental illness, and intravenous drug use. Stigma is itself a complex concept, but broadly speaking it involves holding individuals responsible (often both causally and morally) for their circumstances, it includes judgements of blame and shamefulness, and it acts as a signal to others about the stigmatised—these signals communicate that the stigmatised person or thing possesses traits that are undesirable and ought to be avoided. I explain in greater detail what stigma is, and how it operates, in chapter two.

There is an abundance of empirical evidence that demonstrates the ways in which weight stigma negatively impacts those who are stigmatised. For example, the experience of weight stigma can contribute to peer rejection and social isolation, low self-esteem, body dissatisfaction, and depression (Graham & Edwards 2013; Link 2001; Strauss & Pollack 2003; Stuber et al. 2008). The experience of weight stigma can also contribute to the development of disordered eating and exercise avoidance, both of which are likely to have detrimental effects on physical and psychological health (Bauer et al. 2004; Brewis 2014; Haines, Neumark-Sztainer, Eisenberg, et al. 2006; Puhl & Suh 2015; Puhl & Brownell 2001; Sánchez-Carracedo et al. 2012).

Weight stigma also contributes to the discrimination of those stigmatised. For example, individuals who experience weight stigma are discriminated against in terms of friendship selection and peer rejection (Cramer & Steinwert 1998; Musher-Eizenman et al. 2004), as well as in terms of peer teasing, victimisation and exclusion (Krukowski et al. 2008; Puhl 2011; Puhl et al. 2010; Strauss & Pollack 2003). Children also face discrimination from their parents and teachers, demonstrating how pervasive are stigmatising beliefs about obesity (Carr & Friedman 2005; Depierre & Puhl 2012; Lawrence 2010). There are also correlations between weight stigmatisation and poor health. Evidence demonstrates that health care providers often share stigmatising views about obese individuals (e.g. they are lazy, undisciplined, noncompliant with treatment, and so on), and that obese individuals are less likely to seek adequate health care, receive less time with health care providers, and experience disrespectful treatment in health care settings (e.g. from health care providers) (Bertakis &

Azari 2005; Hebl & Xu 2001; Puhl & Heuer 2010). I canvas in greater detail evidence about weight stigma in chapter two.

Weight stigma not only harms its victims; it also undermines the effectiveness of interventions that seek to utilise weight stigma to promote health. Evidence suggests that campaigns that are stigmatising are less effective than campaigns that focus on broader aspects of health, such as the consumption of fresh fruit and vegetables or multiple health behaviours (Puhl et al. 2013). A study conducted by Puhl, Peterson and Luedicke examining the public's opinion of obesity-related health messages found that "participants responded most favourably to messages involving themes of increased fruit and vegetable consumption, more general messages involving multiple health behaviours, and messages that attempt to instil confidence and personal empowerment for one's health" (2013, p. 778). All those messages were also the most motivating. Policies and campaigns that were stigmatising were not only less effective, but they also increased the likelihood of stigmatised individuals engaging in unhealthy behaviours, such as binge-eating and exercise-avoidance (Graham & Edwards 2013; Haines, Neumark-Sztainer, Eisenberg, et al. 2006; Hayden-Wade et al. 2005; Neumark-Sztainer et al. 2002; Puhl & Suh 2015; Vartanian & Smyth 2013; Zabinski et al. 2003).

The evidence is conclusive: the effects of experiencing weight stigma are profoundly detrimental to physical and psychological health, and as such weight stigma is an issue that requires concerted attention if intentions to improve health are genuine. In this thesis, I identify several anti-stigma intervention strategies that may be useful in combatting weight stigma directly. I will now outline the thesis chapters.

Chapter 1 outline

The first chapter of this thesis focuses on whether the government is ethically justified in its identification of obesity as a public health concern. I distinguish between two forms of identification that are relevant to this discussion: *descriptive identification* and *performative identification*. This distinction stems from John L. Austin's philosophical work on 'utterances' (Austin 1975). Descriptive identification (or a descriptive utterance) is the kind of identification that relates to epistemic truth; it is understood to refer to and establish a 'fact of the matter', notwithstanding that contextual differences can affect what is considered to

be a 'fact' or the 'truth'.[3] Performative identification (or a performative utterance) goes beyond making claims about the way things are; it constitutes an action of sorts. For example, sincerely saying to one's employer "I quit!" is performative in that it *does* something that goes beyond making a statement, namely, ending one's employment. Of course, there are contextual requirements for this kind of utterance as well. Simply saying "I quit!" will not end my employment unless I say it to the right person, they understand it to be my resignation, and a legal framework (e.g. regarding due notice) is in place to make my words efficacious in some way.

In the following way, I propose that the government identification of obesity as a public health concern is an example of performative identification: it constitutes an action, and moreover it is an action of the sort that requires ethical justification. I argue for this point in chapter one. To determine if the government was ethically justified in its identification of obesity as a public health concern, I then propose three criteria by which this ought to be judged: (1) individual action (as distinct from collective and government action) must be insufficient to address the concern; (2) effective and beneficial action must be feasible following the identification; and (3) identification must not result in unacceptable harm. By contrast, any descriptive identification of a public health concern must meet different criteria: only when there is sufficient evidence of prevalence, severity, and economic burden can a disease or issue be descriptively identified as a public health concern with epistemic justification.

I present a detailed argument for these different criteria in chapter one. I then examine whether obesity meets the different criteria. In the case of obesity, the epistemic criteria are sufficiently met—obesity is highly prevalent, has serious health implications, and poses a significant burden on the economy (Ng et al. 2014; Swinburn et al. 2011; Wang et al. 2011; WHO 2009). However, when we turn to the ethical criteria, obesity fails to meet the criteria sufficiently. Whilst it does meet the first criterion (individual action is insufficient to address the concern), it fails to meet the remaining two, meaning that the government was not ethically justified in performatively identifying obesity as a public health concern. Nevertheless, obesity has been performatively identified as a public health concern, and this

[3] For example, the perception of colour can be affected by a number of things: lighting, surrounding colours, whether or not the viewer is colour blind, and so forth. In these cases, there will be differences in the 'truth' of the perception of that colour, without a corresponding difference in the hue of the colour.

raises questions about how government ought to move forward. One possibility is for the focus to shift to other aspects of the causal chain, such as the proliferation of calorie-dense, nutrient-poor foods, the built environment and levels of physical activity, or, as I go on to argue, the impact of weight stigma.

Chapter 2 outline

The second chapter closely examines the issue of weight stigma to answer the question of what ought to be done about weight stigma to improve health. To answer this question, I provide a critical review of relevant literature and develop two tools that can be utilised in a public health setting: the *Spectrum of Approaches to Weight Stigma* (hereafter referred to as the *Spectrum*) and the *Matrix for Anti-Stigma Intervention Strategies* (the *Matrix*).

The *Spectrum* categorises the range of approaches to weight stigma documented in academic literature, allowing for the variations in those approaches to be clearly noted. On one end of the *Spectrum* are writers who endorse and argue for the use of weight stigma as a motivating weight loss approach, whilst on the other end are writers who argue for weight stigma to be combatted directly. In part, the purpose of chapter two is to categorise the various approaches to weight stigma in academic literature. Chapter two's other purpose is to argue for the merit of the sixth and final position on the *Spectrum*: governments and public health researchers ought to directly combat weight stigma.

The *Matrix* identifies several strategies that have been used to reduce and prevent stigma in other settings (e.g. HIV/AIDS and mental illness) (Brown et al. 2003; Rüsch et al. 2005). It also contains an additional strategy that I recommend. After presenting different anti-stigma strategies in the form of the *Matrix*, I then propose intervention approaches that combine these strategies with three generic mechanisms through which stigma operates (Link 2001): *Direct discrimination, Structural Discrimination,* and *Psychosocial processes operating through the stigmatised person*. Thus, the purpose of the *Matrix* is to demonstrate the strategies and approaches that may be effective in combatting weight stigma by directly targeting the mechanisms through which it operates.

Chapter 1: When is the government justified in identifying something as a public health concern? Obesity as a case study

There are many things considered public health concerns: examples include tobacco use, alcohol consumption, environmental pollution and contamination, and the spread of infectious diseases. It seems reasonable to assume that the government ought to identify a public health concern whenever something poses a significant threat to public health. But this assumption turns out to be simplistic and potentially harmful. In this chapter, I explain why. I argue that several criteria must be met for the government to be ethically justified in publicly identifying something as a public health concern.

A government publicly identifies a public health concern in numerous ways. For example, the Head of State, the Health Minister, or another health-related official may make announcements or statements in their official role. Alternatively, the government may release a press release or policy document.

When the government publicly identifies a public health concern, it is performing an act. One reason for thinking this is as follows. When the government publicly identifies a public health concern, the public takes the government to be committing itself or promising to do something about it. And the public is right to do this, given the government's duty and powers: the government has a duty to protect the health of the public and the powers to do so, in many respects. Moreover, the act that the government performs in publicly identifying a public health concern is of a sort that is subject to questions of ethical justification. The act is not trivial, for example, like choosing chocolate over strawberry ice-cream. In this connection, the government's act of publicly identifying a public health concern requires ethical, and not merely epistemic, justification. In other words, it is not enough for a government simply to have good reasons for believing its statements to be true. A government must also be ethically justified in making its statements. I go on to argue how this is so.

In the first section of this chapter, I distinguish between descriptive and performative identification, building on Austin's philosophical work (Austin 1975). Descriptive identification requires epistemic justification, whereas performative identification requires ethical

justification when it constitutes an action of the kind of action that requires ethical justification. I argue that the government's public identification of something as a public health concern is performative, constituting an action, that it is the kind of action requiring ethical justification, and that the following three criteria must be met for this action to be ethically justified.

> (1) Individual action (as distinct from collective and government action) must be insufficient to address the concern.
>
> (2) Effective and beneficial action must be feasible following the identification.
>
> (3) The identification must not result in unacceptable harm.

Later in the chapter, I examine obesity as a case study to illustrate how these criteria can be applied. Most discussion of obesity in public health research and policy fails to register the difference between descriptive and performative identification. For this reason, it fails to register the need for ethical, and not simply epistemic, justification on the part of the government when it identifies obesity as a public health concern. My analysis suggests that governments are epistemically but not ethically justified in identifying obesity as a public health concern. This suggests that public health policies ought to be redirected away from obesity toward different (if related) concerns, such as the food environment or cardiometabolic health.

1.1 Descriptive and performative identification

There are two ways that we can identify a public health concern: descriptively and performatively. I will elaborate what I mean by descriptive identification, then do the same for performative identification. In doing this, I am tracing conceptual relations, namely patterns that structure some of our shared ways of speaking and interacting.

To descriptively identify something, or to make a descriptive "utterance", is to make a statement about how the world is (Austin 1975). In other words, it is to claim that something possesses certain properties. For example, the properties that qualify particular creatures as *arachnids* are: 'having eight appendages'; having a segmented body that includes a 'fused head and thorax (cephalothorax)' and an abdomen; and lacking 'antennae, claws, and wings'

(UXL Encyclopedia of Science 2002). In evaluating things for their properties, we typically determine to which category they belong (e.g. this creature is an arachnid). The category of 'public health concern' may well be vaguer than that of arachnid, with less agreement on defining properties, but the general points I am making still stand. Descriptive identification has the potential for things to be *misidentified,* for example, if the features of an object are mistaken, ignored, or simply not noticed ('Ooh, I did not see those tiny wings!', or 'I never knew cancer was so prevalent!'). Furthermore, because descriptive identification involves matching properties to an object, there is a 'fact of the matter', meaning the identification is either true or false.[4]

It is important to note that context plays a part in whether identification or descriptive utterances are 'true'. The perception of colour serves as a simple example of the ways in which context can influence the truth of descriptive utterances. Consider optical illusions that alter the way colour is processed: the *simultaneous contrast* illusion demonstrates how two squares of the same hue can look markedly different based on the lightness and shading around them (Adelson 2000, p. 339).[5] Hence the truth of what colour the squares are is context-dependent. More broadly, social and cultural norms, amongst other influencing factors, contribute to the context in which descriptive (and performative) utterances are made, and who makes them. There are many ways the same phenomenon can be described or explained, and how meaning is ascribed. In discussing the flooding of a river bank, Jorgensen and Phillips detail several ways the flood may be described, for example, as the result of: heavy rains; the 'greenhouse effect'; or even the manifestation of God's will (Jørgensen & Phillips 2002, p. 9). As Jorgensen and Phillips (2002, p. 9) note, ". . . language is a 'machine' that generates, and a result constitutes, the social world." The context in which descriptive utterances are made, and who in society has the power to make them, is therefore significant; the way things are described, the points of salience, and how meaning is ascribed shapes our social world.

With that said, descriptive identification is, conceptually speaking, either epistemically justified or not. An identification (or utterance) is epistemically justified when there is good

[4] This can be complicated when an object appears to be borderline or 'in-between' categories, which may lead to the re-evaluation and refinement of those categories. For example, we may refine the category *arachnid* if we discovered a new species that looked like a spider in every respect but had wings.
[5] See http://brainden.com/color-illusions.htm for examples of such optical illusions.

reason to believe it is true (put differently, when it is reasonable to believe it is true). But it is important to note that an identification is, in an important way, epistemically justified or not *independent* of whether or not it is true. Let me explain.

To bring out the difference between truth and epistemic justification, consider the commonplace example of trying to guess how many jelly-beans there are in a jar. Suppose that we guess correctly: we correctly state the number of jelly-beans. Our statement is true, but it is not epistemically justified, since there was no good reason for us to believe that our statement was true. We just made a *guess*. We did not count the jelly-beans, or even infer the number based on a small sample. We had no evidence or the word of a person we trust who said they had counted the jelly-beans. Consider another example, the weatherman predicted 'it will rain', but it did not. We often do have good reason to believe something that later turns out to be false. In short, truth and epistemic justification commonly come apart.

Philosophers debate what provides us with epistemic justification, but it is worth touching on one view that is prominent, if implicit, in discussions of whether something really is a public health concern. Evidentialism is roughly the view that a belief, and any assertion based on it, ought to be supported by evidence, rather than by wishful thinking or fear, for instance (Feldman 2000; Marušić 2011). Weiner observes how commonplace is evidentialism: "If I assert something based on the best available evidence, but my evidence misled me, few will condemn me even though I did not know what I asserted" (Weiner 2007, p. 188). For simplicity, we take evidentialism as given: there ought to be good evidence that something really is a public health concern to epistemically justify descriptively identifying it as a public health concern. The standard of evidence required will vary, depending on the context in which it is utilised: what counts as 'good evidence' in a court of law will sometimes differ from what counts as 'good evidence' to support public health policy (Nutley et al. 2013). The kind of evidence that counts as 'good evidence' for the descriptive identification of public health concerns includes, for example, research findings from systematic reviews and meta-analyses, randomised controlled trials, various types of experimental and qualitative studies, and expert opinion (though how 'good' this evidence is may be questioned) (Petticrew et al. 2003). Differences in research design and methodological approaches will have different strengths and weaknesses that may affect how the results of the research (i.e. the evidence) are weighted, and how its relevance is determined (Petticrew et al. 2003, p. 527).

Now let us turn to performative identification. An identification is performative when it constitutes an action or part of an action. Performative identification contrasts with descriptive identification, in that it constitutes not merely a claim about how the world is, but an action of some type or another. According to Austin, an utterance is performative when "[t]he uttering of a sentence is, or is a part of, the doing of an action, which again would not *normally* be described as, or 'just', saying something" (Austin 1975, p. 5). Common performative utterances encompass making a promise, offering or accepting an apology, resigning from a job, and placing a bet. For example, when I say "I bet you $10 it will rain today", I'm not just making a statement about the weather; I'm acting in the mode of committing myself to further action (specifically, paying you $10 if I am wrong about the weather). Most actions require no special authority to be meaningful. But some actions do require a special authority or must meet conditions to be meaningful. For example, in the case of the bet, you need to agree to it, or in the case of making a promise or apology on another's behalf, they need to give you permission or authority to do so. Austin notes that there are requirements that must be met for a promise to be a valid promise. Simply saying the words, "I promise to …" is insufficient; my statement needs to have been heard by another, and be understood as promising (Austin 1975, p. 22).

This raises an important element of performative identification: performance utterances sometimes require a certain *authority.*[6] In some cases, not just anyone can make a performance utterance, and in many cases performative utterances cannot be made on behalf of others. For example, I cannot perform marriage ceremonies or issue expiation notices since I lack the authority to do so; similarly, I am unable to make promises on behalf of others without their assent. I could say the words, but they would not *do* anything. Austin refers to instances where performative utterances are made but not achieved as 'misfires' (1975, p. 16-18). Examples of factors that may contribute to a misfire may be lacking the necessary authority to make such an utterance, or failure for the participating parties to carry out the procedure correctly (e.g. if one partner is already married, they cannot be married again in countries that forbid bigamy) (Austin 1975, p. 17). To reiterate, a performative

[6] I use the terms 'descriptive identification' and 'performative identification' rather than 'utterances' to maintain a narrow focus on the identification of public health concerns. However, the arguments presented regarding the conditions that must be met for each to be carried out will stand regarding other descriptive and performative 'utterances'.

utterance is more than just a claim or statement; it is a *doing* of something, an action or part thereof.

In acting, I am often subject to the question of whether I am ethically justified to act as I do. My action, or utterance *qua* action, must often be justified ethically, and not merely epistemically.

Before continuing, it is worth considering a possible objection: surely making a statement is ethically justified if it is epistemically justified. If we are epistemically justified in making a statement—we have good reason to believe that something is true, perhaps by virtue of the evidence at hand—then surely, we are ethically justified in making the statement. Is this not the case? No, it is not. For example, it is not ethically acceptable to approach a person in the street and tell them that they have a big nose. Perhaps such a statement is epistemically justified; we have seen a lot of noses and we can see that this nose is bigger than most. But we ought to consider more than epistemic justification, since our making the statement constitutes an action. Unless I am a child, I am not 'just' saying that the person has a big nose, since I understand that saying this may offend; I am accosting, insulting, and so on. There are social expectations and duties in force that act to render my words an action and not a mere statement or descriptive utterance. 'I'm just saying, you've got a big nose!' No, you are not just saying; you are doing something. The 'something' that you are doing is contingent upon the context in which the utterance is made. For example, in a culture in which big noses are less desirable or thought to be unattractive, the 'something' you are doing is insulting.[7]

I am not claiming that the contrast between descriptive and performative identification is meaningful or useful *in all contexts*. I am merely claiming that the contrast is useful in some contexts, including the context of a government making public, official pronouncements, as opposed to the context of a government conducting background research and policy development behind closed doors. I am also not claiming that *all* acts require ethical justification, without exception. I do not need an ethical justification to buy chocolate instead of strawberry ice-cream, or to do a little dance when I hear good news. With that said, there

[7] Context is also significant when thinking about obesity: not all cultures and societies will view and regard excess weight in the same ways. Western countries predominantly consider overweight and obesity as negative attributes and personal failings. However, in other countries excess weight may be viewed as a sign of wealth or the ability to withstand famine. Similarly, Japanese sumo wrestlers are revered for their participation in the sport, which has connections to religious ritual, despite their excess body weight.

are circumstances in which such normally innocuous actions may require ethical justification. For example, what is good news for Person A may not be good news for Person B—we may argue that Person A would be in breach of social (and perhaps moral) codes by celebrating their good news with a little dance in the presence of Person B. Many acts do require ethical justification, especially when they stand to result in harm or broken promises. Government pronouncements are acts of this sort. The breaking of a promise is morally salient, and especially so when it is a promise made to the public by the government. The breaking of such a promise can result in harm(s) to the public, for example, as members of the public may make decisions or engage in behaviours they otherwise would not have as a result of expecting the government promise to be upheld. For reasons such as this, it is ethically problematic to make promises that cannot be kept—particularly if the promiser *knows* that the promise cannot (or will not) be kept; this would constitute deception.

1.2 Descriptive identification of a public health concern

Public health practitioners and researchers tend to agree that the enterprise of public health is concerned with population-level disease prevention and health promotion, that it is multidisciplinary in nature, and that it is grounded in scientific research (Faden & Shebaya 2015; Fleming & Parker 2012; Holland 2007; Last 2001; Turnock 2009; Winslow 1923). Not all public health concerns are diseases, but all public health concerns have the capacity to *negatively impact health*. For example, access to clean drinking water, levels of environmental pollution, social phenomena that may lead to poorer mental health and inequities in access to health care (such as racism), and environmental phenomena (such as climate change) are all areas of interest and significance within the field of public health.

A disease or condition is often described as a public health concern on account of it being prevalent, severe and, in some instances, costly in terms of its adverse economic impact.[8] These seem to be applied as criteria governing when one is epistemically justified in descriptively identifying something as a public health concern. Applying these criteria involves judgements that are open to dispute—for example, what are the relative importance of the criteria, must all be met, how do we know when each is met—but not to an extent that the

[8] In this section, we write of 'diseases or conditions' merely for simplicity.

criteria are useless. I go on to discuss each criterion in turn. As mentioned above, descriptive identification ought to be epistemically justified. In line with evidentialism, this means that there ought to be evidence, sufficient in quantity and quality, that something really is a public health concern in view of its prevalence, severity, and adverse economic impact.

The prevalence of a disease or condition tends to contribute to its status as a public health concern. For example, if a disease shows a comparatively high or increasing prevalence, affecting a large or increasing proportion of the population, then it is often flagged as a public health concern.

Severity is also an important criterion that seems to be applied when it comes to describing something as a public health concern. Not all diseases or conditions that affect a large proportion of the population are considered to be public health concerns, often on account of their comparatively low severity or seriousness in terms of personal burden. For example, allergic rhinitis (hay fever) is a common health condition, but it is not generally described as a public health concern (Australian Institute of Health and Welfare 2011). Although hay fever is uncomfortable, sufferers are usually not at serious risk, and the symptoms are usually not too severe or burdensome, so hay fever, while prevalent, is not a public health concern.

In the event that prevalence and severity are borderline, consideration of the adverse economic impact of a disease or condition may provide the necessary support to justify descriptively identifying it as a public health concern, whether the burden is to governments or individuals. Given the many possible resource uses and consequent impacts on health, careful consideration is required to ensure that government resources are used wisely. It is therefore worthwhile to prevent or reduce the incidence of diseases and conditions that burden the economy with a view to freeing up or even generating resources. Regarding individuals, a small number of patients could suffer a disease for which available treatments are very expensive and not subsidised by the government due to cost-effectiveness considerations. Such patients might mortgage their homes and go into bankruptcy to access the treatments. This catastrophic economic burden for some patients, and specifically the injustice this may entail, could be seen as a public health concern.

1.3 Performative identification of a public health concern

When a government publicly identifies a public health concern—say, in the form of a policy or with official statements by a relevant Minister—it acts.[9] It does not merely state the facts. By virtue of the government's duty and authority to do something constructive about public health concerns, such public identification contains something of a promise or commitment to further action. The government can be held accountable for not doing enough to address a public health concern that, by publicly identifying as an issue, it has raised public expectations about addressing.[10]

Moreover, here we have the type of action that requires ethical justification, because harms, broken promises and failed duties can follow. For example, when a government publicly identifies smoking as a public health concern, it risks harming tobacco producers and sellers financially and it risks shaming or stigmatising smokers, with implications for their social standing and mental health. For this reason, the identification must be ethically justified, namely regarding the many countervailing health benefits of identifying smoking as a public health concern. Moreover, since government pronouncements involve promises being made, even if implicitly, they result in broken promises if subsequent action is not up to par. Making a promise is always ethically salient, including when one makes a promise that one should not make.[11]

A government's public identification of a public health concern belongs to a chain of action, which includes the development, implementation, and evaluation of health interventions that may take the form of health promotion campaigns, laws and regulations. Government identification is a necessary step and can be viewed both as an action in itself and as a part of

[9] Within the context of this thesis, I have in mind liberal democratic governments such as those found in the West.

[10] A government can also be held accountable for (descriptively) identifying a public health concern behind closed doors *then not doing* enough to address the concern (including publicly identifying the concern). But this is not the focus of this article and it does not conflict with what we are saying. The descriptive identification itself is not the object of moral criticism; the failure of subsequent *action* is. Inaction can constitute action in the mode of omission when expectations to act exist. More specifically, inaction can constitute *unethical* action when *duties* to act exist—for example, it is wrong for a doctor to stand by and let a patient die when the patient can easily be saved, and consents to treatment.

[11] An agent (e.g. government or individual) should not make a promise that they do not intend or are unable to keep. Breaking promises is wrong irrespective of the consequences, because doing so fails to respect others as rational agents. It breaks trust, which is important in itself, not merely for its social benefits.

this chain of action.[12] As both a statement about how the world is and an action, it must be justified both epistemically and ethically.

According to Rothstein, government action regarding public health is potentially justified so long as three criteria are met.

1) The health of the population is threatened.

2) The government has expertise or power that will meet that threat.

3) Government action is going to be more effective and beneficial than individual action (Rothstein 2002, pp. 146–7).

These criteria provide us with a helpful reference point in discussing the criteria (the action of) government identification of a public health concern must meet to be ethically justified.

Rothstein's first criterion harks back to the criteria for when descriptive identification is deemed to be epistemically justified. Diseases or conditions that are prevalent, severe, or impose substantial economic burdens are fit to be considered threats to population health, namely in proportion to the prevalence, severity, economic burden, or some combination of these.

Rothstein's remaining two criteria help to articulate the first two of my three criteria that the government's identification of a public health concern must meet to be ethically justified: individual action (as distinct from collective and government action) must be insufficient to address the concern; and effective and beneficial action must be feasible following the identification. The final criterion that I propose is as follows: to be ethically justified, the government's public identification of a public health concern must not result in unacceptable harm. I now discuss each criterion in turn.

[12] Governments may identify public health concerns *without* committing to further action, and such identifications are epistemically or ethically justified. For example, in identifying the wrongfulness of social injustices in other countries. This kind of identification may be performative in that it constitutes an action itself, such as taking a stance against those social injustices. Although governments will not have the jurisdictional authority to commit to further action in other countries, in identifying public health concerns in other countries, they may be committing themselves to further action within their own country. For example, in condemning actions that deny or violate human rights, they might be understood as making implicit promises or committing to future action that will not infringe or deny those rights. In the event that the government *does* infringe or deny those rights, the government could legitimately be accused of hypocrisy.

1.3.1 Individual action must be insufficient to address the concern

Brown and Allison suggest that an important aspect of any public health concern is the need for collective or government action (Brown & Allison 2013, p. 341). They discuss examples in which the action of individuals is insufficient to protect individuals from ill health, and thus collective or government action is warranted. The insufficiency of individual action includes the inability of individuals to detect and protect themselves against threats like environmental endocrine disruptors, toxins in public drinking water, and infectious diseases from which protection may only be sufficiently provided via mass vaccination. Brown and Allison may have intended the insufficiency of individual action to function as a descriptive criterion (namely, to partly determine what counts as a public health concern). But I propose that the insufficiency of individual action is better understood as one of three criteria for determining when government identification of a public health concern is ethically justified.

The insufficiency of individual action may be reasonably interpreted in at least two different ways. First, it may be taken to mean that there is no effective course of action available to individuals for them to protect themselves against health threats. For example, consider endocrine disruptors in the environment, or air and water pollution: individuals can't detect these threats, or they are unable to protect themselves against them, or both (Brown & Allison 2013).[13] A different interpretation of the insufficiency of individual action is that individual action is simply less effective than government or collective action. For example, to avoid catching influenza, individuals could limit their exposure to the virus by remaining in their homes, avoiding populated areas such as supermarkets or public transportation, or wearing face masks and other protective gear when out in the community. This course of action would offer some protection against developing influenza, but perhaps not as much as government-supported mass vaccination.[14] Additionally, the more individual approach could

[13] There are instances where individuals are unable to detect threats but are nonetheless able to protect themselves against them, such as ultraviolet rays and the use of clothing and sunscreen to protect against them. Similarly, devices can be utilised to detect exposure. For example, noise meters can alert individuals to potentially dangerous noise levels—and the use of PPE gear such as noise-cancelling headphones can mitigate that threat.

[14] In some instances, government action will be more effective than individual action, but the increased effectiveness will need to be balanced against, for instance, increased interference with individual autonomy

be problematic in some contexts, with clinicians choosing to remain home rather than risk exposure, and with the economic impact of proportions of the employed population choosing not to go in to work.

Either interpretation – individual action is not effective or simply less effective – could be used to apply the criterion of individual action being insufficient. I am not arguing for one interpretation over another; both are supportable. It is important, nonetheless, to note that the first interpretation does not entail that effective action is available on collective or government levels: it could be that we do not yet know of anything to reduce the threat. The second interpretation overlaps with the next criterion we propose.

1.3.2 Effective and beneficial action must be feasible following the identification

The government ought to publicly identify a public health concern only when effective and beneficial action to address the concern is feasible.[15]

It is important to distinguish between *effective* and *beneficial* as those concepts may be conflated within the context of public health, when in fact they are quite distinct. Effective action achieves its intended outcomes. By contrast, beneficial action brings about favourable or advantageous outcomes, but not necessarily the intended ones. By including 'effective' as well as 'beneficial' in this criterion, I seek to rule out actions that are beneficial only by *accident,* that is, actions that produce benefits only *unintentionally.* The goals and aims of policy ought to be specified (i.e. intended) by the government to maintain transparency and openness. The effectiveness of such policy can then be measured in assessing whether the goals and aims have been met sufficiently. Given the responsibilities of government, and the allocation of finite resources, it is important to ensure–as much as possible–that resources

and increased opportunity costs (the increase in effectiveness might not be worth the increase in costs in light of the benefits attainable from some different use of resources).

[15] In this context, effective and beneficial action could either constitute prevention *or* treatment. It need not be the case that the diseases and conditions are preventable, as that could narrow the scope of public health concerns too much. However, the capacity for amelioration (some form of improvement in health or harm reduction) is essential.

will be put towards policies that are most likely to be effective and beneficial to prevent resource wastage.

Effective and beneficial action ought to be practically and politically feasible, not merely theoretically possible. As mentioned, government resources are finite, and political and social circumstances provide limitations on what actions are available. Before publicly identifying a public health concern, government officials ought to ascertain that there exist realistic and reasonable options for effective and beneficial action. Moreover, there ought to be good reason to believe that these options exist, such as sound evidence about the options.

In the event that there is nothing effective and beneficial to be done about the public health concern, the government's identification is ethically problematic, because it will render the government accountable for action that it cannot take. This is troublesome as the population may be misled to believe that the government will be acting to address the public health concern, when in fact this would not be happening.

It may be difficult to know when action will be effective and beneficial, since public health concerns are not always well understood. The process of determining what action would be effective and beneficial can be lengthy, and waiting could have unwelcome and even disastrous consequences. In such cases, it is plausible that alerting the public to the presence of such a threat may itself constitute a beneficial course of action, as would further research and investigation to determine what action would provide an effective solution. Informing the public may present opportunities for them to behave in ways that can offer them some protection (i.e. this protection relies on individuals taking action). For example, the government may place restrictions on access to public spaces during disease outbreaks, or individuals may choose to avoid public areas to prevent contact with the contagion. However, the benefit of alerting the public is obviously contingent upon courses of action then being available to individuals or communities to undertake to protect themselves and one another.

1.3.3 Identification must not result in unacceptable harm

Like doctors and other medical practitioners, public health officials ought to avoid causing harm.[16] While doctors, nurses and other medical practitioners treat individual patients, public health officials work to protect and promote the health of populations and of the communities, families and individuals that comprise them. The precautionary principle can be invoked as a way of providing guidance to efforts to protect to the public's health. According to one version of the precautionary principle, "[w]hen an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically" (Myers 2004, p. 1). In other words, when there is substantive uncertainty regarding the safety of an action, those taking or entertaining the action should take precautions to protect the public from harm. Sometimes this will mean not going ahead with the action. Public health officials bear this responsibility.

The government's public identification of a public health concern can result in harm. For example, it can create alarm and distress, which will not be alleviated if effective and beneficial action is not taken.

It may not be feasible to avoid all harm in addressing public health concerns, and therefore trade-offs may be necessary. This will involve balancing an action's benefits against its harms (both expected and merely possible).[17] Judgements here will be open to dispute, but not to an extent that judgements will be insupportable.

The *distribution* of harms and benefits, and not only their probabilities and magnitudes, is also ethically significant, especially in the context of public health. When thinking about who is burdened and benefited by an action, public health officials should consider whether those who incur additional burdens can afford them. Here we are not merely referring to finances, but also to health, social standing, and other goods whose distribution is a matter of justice. Similarly, who is being benefitted is ethically salient. Public health officials might be justified in doing harm under different circumstances: if both harms and benefits are evenly

[16] We use the term 'public health official' to encompass medical practitioners as well as government employees and decision makers who may contribute to, produce, and implement health policy.

[17] Democratic governments should evaluate the probabilities and magnitudes of benefits and harms in a way that the public supports. Different publics (e.g. different countries) might well find different levels of risk acceptable.

distributed; if the harms are borne by those in society who can most afford them; if the harms are necessary to improve the worst off in society; if the harms are significantly overshadowed by benefits; if alternative actions produce worse or worse-distributed harm; or if some combination of these considerations apply. Conversely, there may well be some harms that are so serious that they cannot be justified by any countervailing benefits.

Even if a disease or condition is sufficiently prevalent, severe and economically burdensome to qualify as a public health concern, the government is not ethically justified in publicly identifying the concern when doing so will result in unacceptable harm, considering the points above about when harm may be acceptable. The manner of identification, and the public health messages thereby communicated, can also result in harm, as we shall later demonstrate when discussing the case of obesity.

In summary, to be ethically justified, the government's public identification of a public health concern ought to meet three criteria. First, individual action to address the concern ought to be unavailable, ineffective, or less effective than collective and government action. But this is not enough. Whilst the insufficiency of individual action allows for government action, it does not entail that there is something governments can do, or that government action will be effective or beneficial. Therefore, following the government's identification, action to address the concern ought to be practically and politically feasible, not merely theoretically possible. And such action ought to be effective as per intentions and produce advantageous results. Finally, the government's identification ought not to result in unacceptable harm, considering the countervailing benefits and the severity and distribution of harms, including especially whether pre-existing burdens stand to be compounded by the government's identification.

1.4 Obesity as a case study

In this section I illustrate how the epistemic and ethical criteria for the descriptive and performative identification of a public health concern can be applied, with a focus on obesity as a case study. I argue that obesity sufficiently meets the epistemic criteria: that is, the claim that obesity is a public health concern is epistemically justified. However, obesity does not sufficiently meet the ethical criteria: that is, the government's identification of obesity as a

public health concern, notably in the form of ongoing obesity policies, is not ethically justified, especially because of the unacceptable harm it produces.

1.4.1 Epistemic criteria

1.4.1.1 Prevalence

The term 'obesity' is often used to refer to abnormal or excess weight that may negatively impact health (WHO 2009). Over the past three decades, the prevalence of obesity has increased significantly worldwide, particularly in areas of lower socioeconomic status within developed countries (Lagerros & Rössner 2013; Flegal et al. 2012; WHO 2009; Ng et al. 2014). A 'healthy' BMI ranges from ≥18.525kg/m² and ≤24.925kg/m²—a BMI any higher indicates excess weight.[18] According to the World Health Organisation, an estimated one billion people are overweight, meaning they have a BMI of ≥ 25kg/m². 300 million of these people are obese, meaning they have a BMI of ≥30kg/m².

1.4.1.2 Severity

Obesity has serious health implications. Excess weight has been identified as one of the leading risk factors for chronic disease (WHO 2009). Obesity is consistently associated with higher rates of mortality and co-morbidities that include cardiovascular diseases, type II diabetes, sleep apnoea, asthma, some cancers, low self-esteem, eating disorders, body image issues, and depression (Ebbeling et al. 2002; Greener et al. 2010; Lytle 2012; Swinburn et al. 2011).[19] Additionally, societal attitudes and prejudices regarding obesity and obese individuals create and perpetuate stigma, weight bias, discrimination, "fat-shaming", and other psycho-social phenomena that not only reduce quality of life, but also compound the health problems caused by obesity (Rebecca M Puhl et al. 2013; Puhl & Brownell 2001; Puhl

[18] Well-known limitations of the BMI are that it fails to account for the regional distribution of weight (which affects health differently depending where fat is stored), and its failure to account for the constitution of weight (e.g. the weight of muscle, fat, bone, and other tissue).

[19] There is some disagreement about whether obesity in itself ought to be considered a disease or risk factor. If critics are correct, it may be that the epistemic criteria discussed above are not met sufficiently (e.g. obesity itself may not be a severe disease or incur serious economic burdens). While it is important to acknowledge this debate, the main point of this article is to demonstrate that ethical criteria are not sufficiently met.

& Heuer 2009). Obese children, given the likelihood of growing up to be obese adults, face the same physical and psychosocial risks, with the addition of musculoskeletal conditions such as Blount's disease (knock-knee) and other conditions related to childhood development (Ebbeling et al. 2002). An early onset of obesity means that individuals must bear these burdens for a much longer time period, which contributes to reduced quality of life and increased mortality and morbidity.

1.4.1.3 Adverse economic impact

Obesity imposes a significant economic burden on government. The high prevalence of obesity and its association with chronic diseases and other health problems have direct, adverse implications for health system finances, increasing the demand for health care (Swinburn et al. 2011; Wang et al. 2011). For example, costs are incurred by treating obesity-related diseases such as type II diabetes or heart disease, or by the needs of obese patients for specialised equipment or facilities to accommodate them, and for higher doses of body-mass-dependant medicines. Obesity also results in lost productivity as a result of ensuing chronic disease and illness (Wang et al. 2011). To relieve the burden on the health system and broader economy, the prevention of chronic disease, including that associated with obesity, is paramount.

The above application of epistemic criteria demonstrates that obesity does satisfy the criteria that tend to define public health concerns, meaning that it is epistemically justifiable to descriptively identify obesity as a public health concern. The epistemic identification of obesity raises the questions of, what is the 'problem' represented to be, and what underlying assumptions are being made? The answer to those questions will shape the range of responses appropriate for 'solving' the problem (Bacchi 2009).

1.4.2 Ethical criteria

I will now apply the ethical criteria to the case of obesity.

1.4.2.1 Individual action must be insufficient to address the concern

Individuals cannot protect themselves against some factors that contribute to obesity, such as one's genes and endocrine disruptors in the environment, which are undetectable to individuals. However, according to Brown and Allison, other contributing factors such as caloric overconsumption and sedentariness are avoidable by individuals (Brown & Allison 2013, p. 341).

Brown and Allison conceptualise unavoidable risk factors as constraints, and avoidable risk factors as merely influences, but this fails to account for the complicated aetiology of obesity, and how little control we truly have over some seemingly-avoidable risk factors. For example, despite the introduction of kilojoule and calorie labelling in food items and some restaurants (Kersh et al., 2011), the information provided is often difficult for people to process. One would need to be aware of one's daily kilojoule or calorie intake allowance, and calculate how much of that allowance each meal, snack and beverage would constitute. When considering the recommended daily intake of particular types of calorie (e.g. proteins, carbohydrates, and fats) this becomes even more complex. Moreover, nutritious foods are not always accessible or affordable, and cheaper calorie-dense processed foods are often the only alternative. Even with access to nutritious food, individuals still require knowledge of how to prepare and store these foods. Similarly, workplaces don't always allow for much physical exercise; many jobs are sedentary, involving sitting at desks and computers, driving vehicles or operating machinery. Opportunities are limited, at best, for individuals to overcome barriers like these.

Evidence supports the view that individual action is insufficiently effective when it comes to losing weight and maintaining weight loss over time, indicating a potential role for collective and government action (Bombak 2014). Overall, the above considerations suggest that obesity meets the ethical criterion concerning the insufficiency of individual action; if obesity is to be successfully addressed, it will not be through individual action alone but partly through collective and government action.

1.4.2.2 Effective and beneficial action must be feasible following the identification

In June 2012, New York City Mayor Michael Bloomberg proposed to ban the sale of sugar-sweetened beverages (such as soda) larger than 16 ounces, a move which would affect the

city's eateries, street carts, stadiums, and theatres. The proposal was met with influential criticism and opposition from the beverage industry, much of it presented in terms of the rejection of unnecessary, and therein overbearing, interference with individual freedom. The prominence and influence of this opposition highlighted the importance of the political setting and culture in which government action takes place. Given the political climate in many liberal democracies, where industry tends to vehemently resist government regulation and governments are extremely sensitive to concerns about economic productivity and employment, government action that targets individuals as citizens and consumers may be the only feasible alternative to targeting industry as a key shaper of the food environment.

It may be the case that when obesity was first identified by government as a public health concern, there was relatively little known about what action might be effective and beneficial in addressing it. With that said, there has been no population-level success in addressing obesity prevalence in over thirty years (Ng et al. 2014), although the knowledge base about obesity has increased and improved significantly. Government actions to address obesity have included educational campaigns that inform the public about nutrition and physical activity requirements, community support programs such as OPAL, BMI report cards at schools, calorie or kilojoule labelling on menu items and packaged foods, restrictions on food marketing directed towards children, and taxes on junk foods and sugary beverages (Bogart 2013; Borys et al. 2012; Dutton et al. 2012; Kersh et al. 2011; Magnusson 2010; ten Have et al. 2011).[20] With the exception of marketing restrictions (which curb corporate behaviour), these interventions are designed to influence or at least inform individual behaviour. The fact that there has been no population-level success in addressing obesity prevalence suggests that government action targeted towards *individual* behaviour is insufficiently effective.[21]

To identify *obesity* as a public health concern could substantially and unreasonably narrow the available courses of action to address the issue of related ill health. It could also detract from more effective and beneficial action aimed at other factors. If excess weight (relative to height) is identified as the problem, then the potential solutions will be to either *lose* or *avoid*

[20] OPAL is an Australian childhood obesity prevention initiative modelled after the French '**E**nsemble **P**révenons l'**O**bésité **D**es **E**nfants' (EPODE); which translates to '*Together Let's Prevent Childhood Obesity'*.

[21] Government initiatives that focus on individual action are not altogether ineffective approaches, since highly effective vaccination programs rely on individuals taking action (i.e. seeing medical practitioners to receive vaccination). However, government approaches that focus on individual action are not effective within the context of obesity.

gaining excess weight (presuming getting taller is no solution!). The focus on obesity specifically may itself incline the government toward targeting individual action, given widespread (though mistaken) ideas about the aetiology of obesity, specifically that it is under individual control.

There is overwhelming evidence that individual weight loss is incredibly difficult to achieve and maintain. However, suppose that individual weight loss is achieved partly through government policy. This does not mean that health is necessarily improved. In other words, targeting individual action could be 'effective' in terms of reducing weight yet not necessarily provide *benefit.* For example, individuals who crash diet, binge, or exercise to excess may successfully lose weight (at least temporarily), but they may also risk exposing themselves to other (potentially more formidable) health problems in doing so. This may achieve intended effects, but not necessarily a net health benefit. Additionally, given the difficulty experienced by individuals in maintaining weight loss over time, we could argue that identifying weight as the problem does not provide for effective or beneficial action. Rather than identifying *weight* as the problem, one alternative is to identify as the problem the calorie-dense and nutrient-poor food environment or the way in which the structured environment encourages sedentariness (e.g. office work, longer working hours, and so on).

As touched on earlier, excess weight and poor health have been strongly linked, such that being overweight or obese means that one is more likely to be unhealthy. However, non-overweight and non-obese individuals are also exposed to the same (if reduced) risks of chronic disease and ill health, for example by virtue of the proliferation of fast food and sedentary jobs. We could ask why, then, would we identify obesity as the problem rather than chronic diseases and other conditions, especially since these are what we really care about from a health perspective. Admittedly, there may be an advantage in bundling chronic diseases and co-morbidities together in one package, and obesity provides such a package that may allow for those problems to be addressed simultaneously (in health promotion, for example). However, this convenience is overridden by the harm that results from the performative identification of obesity as a public health concern. We focus on harm in the next section. But first, a few final comments regarding the focus on obesity as a public health concern are needed.

A focus on excess weight (obesity) is too simplistic in that it fails to register the multi-faceted nature of health. But, even if excess weight (or obesity prevalence) is the identified concern, it may be more effective and beneficial to address it *indirectly,* because the many barriers to weight management mean that effective and beneficial action is not currently forthcoming. Weight stigma serves as such a barrier, given its negative effects on consumption and engagement with physical activity (Brewis et al. 2011; Lewis et al. 2011; Schvey et al. 2011). By targeting factors that contribute to obesity—such as the nutrient-poor calorie-dense food environment or sedentariness—some barriers to weight management may be avoided.

Additionally, as I have argued earlier, issues of individual control and responsibility are central to popular understandings of obesity aetiology. Accordingly, obesity is understood as the result of individual failings which may make the adoption of population-level intervention aimed at obesity more difficult. For example, the implementation of a population-level intervention such as a sugar tax may receive backlash from members of the public if they believe obesity to be the result of individual failings and do not consider themselves to need such intervention *("Why should I be affected by such policy? I am not obese, I watch what I eat, I have self-control,"* and so on). Similarly, the underlying assumptions and misunderstandings regarding obesity aetiology may influence and shape the range of public health responses (e.g. policies), and the very development of public health intervention (e.g. population-level intervention vs. individual level intervention). The questions of how and to what extent obesity can be combatted are complex questions, and relate to how public health policy is targeted. Indirectly addressing obesity (through the identification of other things as public health concerns) may therefore side-step some of these problems and allow for government action to be taken more effectively and beneficially.

1.4.2.3 Identification must not result in unacceptable harm

There are good reasons for thinking that performatively identifying obesity as a public health concern creates considerable harm, and this acts as a compelling reason not to undertake such identification. If the government publicly identifies obesity as a public health concern, then the public may be misled to think that *excess weight* is the fundamental problem at issue and that it is inevitably tied with ill health. Whilst obese individuals are more likely to be

unhealthy, it is possible to be cardio-metabolically healthy, for example, whilst carrying excess weight. There are many health issues associated with carrying excess weight beyond cardiovascular disease, including joint problems, increased risk of some cancers, and respiratory problems. To be cardio-metabolically healthy whilst carrying excess weight does not imply that these other health issues will not be present, but it does illustrate the possibility of targeting and preventing, or protecting against, health issues independently of losing excess weight.

Identifying *obesity* as a public health concern, rather than, say, the proliferation of fast food restaurants or sedentary jobs, risks promoting harmful attitudes about the nature of the problem and about who might bear responsibility for it. It risks promoting negative societal attitudes that encompass fat-shaming, stigmatisation, and weight-bias, specifically because of the popular misunderstanding of obesity as essentially an individual failing.

In this context, adequately considering harm requires more than weighing harms against benefits; it requires carefully considering the distribution of those harms and benefits. Despite the prevalence of obesity across society, obesity occurs in far higher rates within lower socioeconomic and disadvantaged groups (Goodman 2003; Sobal & Stunkard 1989); thus any harms (relating to increased weight stigma, for example) are likely to disproportionately affect these communities (O'Dea 2005). This is significant because those groups are *already* marginalised, burdened, and worse off than most members of the community. To compound those disadvantages is ethically unacceptable, and especially so if these individuals do not reap many, if any, countervailing benefits.

In summary, obesity does meet the ethical criterion of individual action being insufficient to address the concern, since it is incredibly difficult and usually ineffective for individuals to address obesity. However, it is not sufficiently clear that effective and beneficial action can be undertaken at a collective or government, therefore obesity does not meet this second criterion. Similarly, the harms that are caused by performatively identifying obesity as a public health concern cannot be justified, since the harms are significant and they further burden individuals and communities that are already marginalised and vulnerable. Hence, obesity fails to meet this final criterion. Despite the descriptive identification of obesity as a public health concern being epistemically justified, the performative identification of obesity as a public health concern is not ethically justified.

1.5 Conclusion

By evaluating obesity for the properties it bears, one can see that obesity meets the epistemic criteria of prevalence, severity, and adverse economic impact. Based on this, the descriptive identification of obesity as a public health concern is epistemically justified. However, the performative identification of obesity as a public health concern constitutes the kind of action that also requires ethical justification. For a government to be ethically justified in publicly identifying something as a public health problem, I have argued that: (1) individual action (as distinct from collective and government action) must be insufficient to address the concern; (2) effective and beneficial action must be feasible following the identification; and (3) the identification must not result in unacceptable harm. Obesity fails to adequately meet the second and third criteria, and so the performative identification of obesity as a public health concern is not ethically justified.

Make no mistake: this conclusion does not mean that government action is never ethically justified. On the contrary, the government is morally obligated to protect and improve people's lives, and as such it is obligated to mitigate threats to public health. However, in the case of obesity, the government's performative identification has missed the mark.

Despite lacking ethical justification, obesity *has* been performatively identified as a public health concern. This raises the question of how we ought to proceed now, and whether we might rectify this erroneous action. As I mentioned earlier, alternatives could include addressing obesity *indirectly* via the identification of other aspects of the causal chain, for example the calorie-dense and nutrient-poor environment, the structured environment, or sedentariness.

One promising option is to put weight aside altogether and focus on addressing the correlates of obesity, such as poor cardiometabolic health. To do so would be more ethically acceptable, because effective action is more likely to be feasible *and* provide advantageous results, such as the improvement of health, even when weight is unaffected. Additionally, *if* other factors such as cardiovascular disease were identified in place of obesity, it would broaden the scope of possible solutions, whilst also reaching a greater target audience (as not everyone diagnosed with cardiovascular disease is obese).

Bridging section: Redirecting attention away from obesity toward weight stigma

The government's performative identification of obesity as a public health concern is not ethically justified, therefore it would be more ethically acceptable for the government to move away from interventions that target obesity directly and consider addressing obesity *indirectly* by identifying and acting on other aspects of the causal chain. These include the calorie-dense and nutrient-poor environment and low levels of physical activity. Another insidious aspect that functions to perpetuate obesity is weight stigma, namely the stigmatisation of obesity and of individuals perceived to be overweight or obese. Weight stigma not only contributes to weight gain but impairs weight loss attempts by producing exercise avoidance (Brewis 2014; Zabinski et al. 2003). With the ability to undermine healthy behaviours, contribute to disordered eating, and act as barrier to physical activity and access to health care, weight stigma has detrimental effects for physical and mental health and poses a serious problem for public health efforts (Bertakis & Azari 2005; Budd et al. 2011; Major et al. 2014; Puhl & Heuer 2010; Puhl & Suh 2015).

There is a need for the government to undertake some form of 'damage control', since its identification of obesity as a public health concern has led to the creation and perpetuation of harm, especially by compounding weight stigma. Obesity is widely misunderstood to be the result of individual failings; as a result, responsibility and control are attributed to individuals, and thereby individuals perceived to be overweight or obese are deemed weak-willed, undisciplined, and lazy (Puhl et al. 2008; Schwartz et al. 2003; Wardle & Cooke 2005). Such stigmatising beliefs are linked with the discrimination of individuals, on interpersonal and structural levels, affecting multiple areas of life, including personal relationships and support networks, education, employment, income, and access to health care (Brewis 2014; Link & Phelan 2006; Link 2001; Swift et al. 2013).

More broadly, the stigmatisation of individuals and discrimination diminish quality of life and contribute to the development and exacerbation of physical and mental health problems. It is therefore important that something be done about the stigmatisation of obesity, or weight stigma, to reduce these harmful consequences and improve health.

In the following chapter, I discuss the issue of weight stigma in greater detail. I canvas empirical evidence of weight stigma's deleterious effects on health and the mechanisms by which weight stigma may contribute to weight-based discrimination. I identify and place along a spectrum the various approaches to weight stigma that exist in the academic literature. Finally, I propose anti-stigma intervention strategies that may provide the government and other actors with opportunities to reduce weight stigma by targeting the mechanisms through which it operates.

Chapter 2: What should be done about weight stigma to improve health?

The stigmatisation of diseases, conditions, and characteristics has a long history within public health. Tuberculosis, leprosy, HIV/AIDS, cancer, mental illness, prostitution, and homosexuality are just some of the things that have been stigmatised. Research on these and the related stigma has demonstrated that stigma acts as a significant and dangerous barrier to health care, and itself has harmful effects on physical and mental health (Brown et al. 2003; Mahajan et al. 2008; Puhl 2011; Puhl & Brownell 2001). These research findings have prompted concerted effort to reduce stigma, particularly and more recently with HIV/AIDS and mental illness. Similarly, a growing body of literature has examined weight stigma, or the stigmatisation of obesity, and it has documented a range of harmful effects on health.

Obesity is a deeply stigmatised condition in that overweight and obese individuals have been stereotyped as lazy, undisciplined, incompetent, weak-willed, and gluttonous. Meanwhile, beliefs that self-indulgence, gluttony, and laziness cause obesity hold overweight individuals responsible for their condition (Dejong 1980, p. 77). As Cahnman reflects, "Clearly, in our kind of society . . . being overweight is considered to be detrimental to health, a blemish to appearance, and a social disgrace"(Cahnman 1968, p. 283). Many individuals who are perceived to be overweight or obese experience interpersonal and structural discrimination, which includes, but is not limited to, social ostracism, disrespectful treatment, and fewer opportunities in areas of employment, education, and medical treatment (Hatzenbuehler et al. 2013; Link 2001; MacLean et al. 2009; Musher-Eizenman et al. 2004).

Academic literature attests that weight stigma can result in psychosocial harms, including social isolation and discrimination. In turn, these harms can negatively impact self-esteem, academic achievement, employment opportunities, and health. Most writers recognise that intentional stigmatisation is both ineffective and morally problematic as a policy option to reduce obesity. However, despite this, there have been few attempts by governments and others to reduce weight stigma, and the few attempts that have been made have been unsuccessful.

Empirical evidence supports the views that weight stigma (a) is an ineffective obesity prevention strategy, (b) actually *perpetuates* obesity via influencing behaviours such as

overconsumption and exercise avoidance, and (c) has deleterious effects on physical and mental health. Given the strength and volume of empirical evidence, it is clear that weight stigma ought to be reduced (independently from obesity) in an effort to improve health.

There are a range of positions in academic literature regarding how weight stigma ought to be dealt with, from encouraging the intentional use of stigmatisation as an obesity prevention strategy, to the argument that not only is this a harmful approach, but that weight stigma needs to be combatted independently from obesity. Previous interventions to reduce weight stigma have been largely unsuccessful: although some interventions were able to positively impact people's beliefs about obesity causation and responsibility, there were no corresponding changes to behaviour that followed, such as a reduction in discrimination. In this chapter, I will demonstrate not only that it is ineffective and harmful to employ weight stigma as a strategic approach to obesity prevention, but also that weight-stigma ought to be combatted directly, and I will provide suggestions for what weight stigma-reducing interventions should encompass.

In the first sections of this chapter, I provide a definition of stigma, the mechanisms with which it operates, and the effects of experiencing stigma. Following this, I discuss several strategies that have been previously used to reduce stigma in other areas, such as HIV-AIDS and mental illness, and draw attention to the features of intervention that might be applied in the case of weight stigma.

After providing a detailed analysis of weight stigma and the empirical evidence that demonstrates its deleterious effects on health, I present the *Spectrum of Approaches to Weight Stigma*. This *Spectrum* details the nuances and complexities of the views on what should be done about weight stigma that are expressed in the literature. I will then briefly analyse several previously implemented interventions to reduce weight stigma, before making recommendations about how to combine previous intervention strategies with the mechanisms by which stigma operates. I present these recommendations in a table: the *Matrix of Anti-Stigma Strategies.*

2.1 What is stigma?

To provide a comprehensive definition of stigma is beyond the scope of this thesis; however, below I describe stigma and provide a working definition for the purpose of my argument.

There is conceptual variation in how stigma is defined, in part due to two things. First, the concept of stigma has been applied to a wide variety of things, such as mental illness, AIDS, leprosy, disability, cancer, and non-health related issues, such as exotic dancing, IQ, choice of profession, and sexual orientation. Second, a wide variety of analytical tools have been used to examine stigma and its effects, in part reflecting the multi-disciplinary nature of stigma research.

In his seminal work, Erving Goffman described a stigmatised attribute as "an attribute that is deeply discrediting"; the stigmatised attribute reduces the bearer "from a whole and usual person to a tainted, discounted one" (Goffman 1963, p. 3). More recently, Link and Phelan further argued that stigmatisation is a product of "the co-occurrence of certain interrelated components", positing that relationships between particular components result in the stigmatisation of individuals and sub-populations (Link & Phelan 2014, p. 367). These components include: distinguishing and labelling human differences; associating those differences with negative attributes and stereotypes; separating 'us' and 'them'; and the status loss and discrimination experienced by the stigmatised (pp. 367–376). Link and Phelan went on to assert that the stigmatisation of individuals and sub-populations relies upon "access to social, economic, and political power that allows the identification of differentness, the construction of stereotypes, the separation of labelled persons into distinct categories, and the full execution of disapproval, rejection, exclusion, and discrimination" (Link & Phelan 2014, pp. 375–376). In other words, the values and opinions of one group dominate and are expressed in ways that result in individuals being discriminated against.

Link (2001) presents three generic mechanisms through which stigmatisation can have negative consequences for stigmatised individuals. Understanding these mechanisms may provide an opportunity to develop intervention approaches to counter them in specific contexts, such as the context of obesity. Link's three mechanisms are: *direct discrimination*, *structural discrimination*, and *social psychological processes operating through the stigmatised person*.

Direct discrimination involves attitudes and beliefs directly issuing in discriminatory behaviour: Person A's stigmatisation of Person B causes Person A to engage in obvious forms of overt discrimination (e.g. rejecting a job application, social exclusion, or denial of educational opportunities or health insurance). *Structural discrimination* refers to inequalities in life chances, not necessarily overt discrimination. For example, in the US employers often rely on personal recommendations from colleagues or acquaintances regarding hiring practices. More often employers are white, their colleagues and acquaintances are more likely to be white, and so they are more likely to recommend white candidates, simply because they know more white candidates. In this scenario, the employer does not need to hold racist attitudes or beliefs to discriminate against non-White persons (Link 2001, p. 9). *Social psychological processes operating through the stigmatised person* are also described in other literature in terms of 'self-stigma' or 'self-stigmatisation' (Barlösius & Philipps 2015; Evans-Polce et al. 2015; Rüsch et al. 2005). People develop conceptions of a stigmatised condition such as mental illness early in life as part of being socialised into their culture; these conceptions then become 'lay theory'. Expectations are formed as to whether most people will devalue a person with a mental illness and reject them as a friend, spouse or employee (Link 2001, p. 10). If a person then goes on to develop a mental illness, they may fear that those expectations will be applied to them (Nolan & Eshleman 2016).

When stigmatising messages become part of an individual's own worldview, this can have serious negative consequences. For example, fear of rejection may mean acting less confidently, withdrawing from or avoiding certain situations, and having strained and uncomfortable social interactions. In turn, this may cause social networks to be constrained, leading to social isolation or exclusion, compromised quality of life, unemployment, and income loss. It is also important to note that this is *anterior* to the experience of direct and structural discrimination. Moreover, Link's three mechanisms are mutually reinforcing. For example, as a result of receiving poor treatment via direct discrimination (mechanism 1), an individual may come to expect further poor treatment (mechanism 3).

A variety of responses to stigma can mitigate against some of its harmful effects. For example, identification with the stigmatised group can influence the ways in which stigmatised individuals respond. Regardless of whether the individual possesses the stigmatised trait, if they do not identify as part of the stigmatised group they are likely to remain indifferent to

stigma because they do not feel that it (and even related discrimination) applies to or refers to *them*. However, if an individual does identify as part of the stigmatised group, then their reaction may be modified by perceived legitimacy: if they consider the stigmatisation to be legitimate, then their self-esteem and efficacy suffers and is likely to be quite low (Rüsch et al. 2005, p. 533). However, if they consider the stigmatisation to be unfair and illegitimate, then they are likely to respond with righteous anger, say. For example, a proud black woman may externalise unpleasant situations as racism and thus not internalise the negative messages; rather, she attributes them to external factors ('That racist person!') (Nolan & Eshleman 2016).

Given the complexity of stigma, it is important for stigma-reducing interventions to be multifaceted: ideally interventions need to address the different mechanisms that lead to discrimination and unequal outcomes and they need to address both individual and structural levels of discrimination. Deeply held beliefs and attitudes that provide the foundation for stigmatisation and discrimination need to be addressed. We could do this in one of two ways: we could develop and implement (1) interventions that produce fundamental changes in beliefs and attitudes, or (2) interventions that directly limit the power of stigmatisers to act on those beliefs (Link & Phelan 2014). In other words, we could change beliefs or moderate behaviours.

2.1.1 Interventions to reduce stigma in some contexts

Diseases and conditions such as tuberculosis, leprosy, HIV/AIDS, and mental illness have each been burdened with stigma. As public health officials have begun to understand the negative impact that stigmatisation has on health, interventions have been developed and implemented to reduce stigmatisation and its negative consequences. In the following section, I discuss examples of intervention approaches that have been implemented to reduce the stigmatisation of HIV/AIDS and mental illness. Using these examples, I note the factors that may have contributed to reductions in stigmatisation, and then I consider how these factors may be adapted or translated to reduce weight stigma.

Brown, Macintyre and Trujilo (2003) provide a review of studies that focussed on interventions to reduce HIV/AIDS stigma. Based on the study goals and the target audience,

Brown et al. assigned the studies into three categories: (1) “increase the tolerance of Persons Living with HIV/AIDS (PLHA) among segments of the general population”; (2) “increase the willingness to treat PLHA among health care providers”; and (3) “improve coping strategies for dealing with AIDS stigma among those at risk or already infected”. Interventions were then divided into four further categories based on the style of intervention: “*information-based”*; “*skill building”*; “*counselling approaches”*; and “*contact with affected groups”*.

Information-based interventions delivered information through a variety of mediums including advertising, leaflets, information packs, videos and presentations in classes or lectures. Content included factual information about the disease, modes of transmission, and methods of risk reduction. With respect to stigma, content emphasised that individuals were not to blame for getting HIV/AIDS and that they ought to be accepted into the community. *Skill-building* approaches aimed to teach skills for diffusing conflict and learning coping behaviours at the individual or small-group level through the use of roleplay, master imagery, scripting, group desensitisation, and reframing and relaxing techniques. For example, master imagery presents a hypothetical situation in which the individual has contact with a PLHA and is taught the appropriate coping skills. Another approach, group desensitisation, first teaches relaxation techniques before progressively exposing the individual or group to a range of situations in which there is contact with a PLHA, using the newly learnt techniques to decrease tension. *Counselling approaches* provided accurate information on HIV/AIDS, allowed for more intimate discussions of concerns, and provided support for behaviour change or the maintenance of safe behaviours. For example, one-on-one counselling and support groups provide a safe environment for PLHA to receive personal support in resolving issues or situations, such as disclosure of HIV/AIDs status or instances when the PLHA feels they are being shunned by their spouse, family, friends, and so on. These approaches can also include skill building. *Contact with affected groups* occurred when individuals from the general population were helped to interact with a PLHA, either directly (e.g. conversing in person or hearing live testimonials) or vicariously (through the media or recorded testimonials).

The review reported general success in improving knowledge about AIDS and infection control and in improving people’s willingness to treat PHLA. However, the fear of infection among health care workers was not reduced, likely contributing to the preference of nurses

to refer PLHA patients to other health care workers remaining high (90%) after intervention (Brown et al. 2003, p. 64).

A study conducted in Tanzania was one of the most successful, with long-term improvements to primary school students' tolerance of and willingness to care for PLHA. It was a randomised community trial lasting three months. Students received AIDS-related information, engaged in small-group discussion about risk reduction, created posters depicting perceptions of HIV risk factors, and participated in role play. The goal was to improve students' attitudes as they pertained to their tolerance of and willingness to care for PHLA. At the 12-month follow-up, improvements were still significant (Klepp et al. 1997).

Several factors could have contributed to the success of the Tanzanian study. It was conducted over three months, and this sustained effort may have allowed students to engage with the information and lessons more consistently, perhaps allowing those messages to be more deeply understood. The mixed-methods approach could also have been a way to reinforce the messages of tolerance and the development of empathy and compassion. The different modes of learning, like roleplay and poster making, could have reinforced the accurate information provided by lectures, pamphlets and videos by requiring creativity and understanding on the students' part. Targeting school children also has benefits in that children's attitudes may not be as fixed as they become in adulthood, and therefore the children may be more receptive to messages that promote tolerance and willingness to care.

Interventions that relied on information alone, such as those implemented to increase health care workers' tolerance of PLHA (Brown et al. 2003, p. 64), were unsuccessful in changing attitudes by the time of follow-up, indicating that information is not likely to be sufficient to change stigma-related attitudes or behaviour in the long run. This phenomenon is also observed in interventions to reduce weight stigma, demonstrating that the provision of accurate information (e.g. regarding personal control and responsibility) is insufficient to produce changes to attitude and behaviour (Bell & Morgan 2000; Musher-Eizenman et al. 2004; Sigelman 1991; Sigelman et al. 1986). The combination of information and skill-building strategies is more effective in increasing knowledge and reducing some stigmatising attitudes in the general population (as compared with information alone), as noted in the Tanzanian intervention (Klepp et al. 1997). Similarly, the duration of an intervention may also contribute to its success in reducing stigmatising attitudes and behaviours.

A pilot project to reduce mental illness stigma in young people in British high schools showed similar results to those of HIV/AIDS stigma-reducing interventions (Pinfold et al. 2014). The intervention, run by Mid-Kent Mental Health Awareness group, consisted of a workshop that contained two phases, with each focussing on a different strategy to address psychiatric stigma and discrimination: *education* and then *contact* strategies were used. The first phase was facilitated by someone who had worked in mental health, and concentrated on increasing pupils' understanding of mental health and mental illness by showing a video about people living with depression and schizophrenia and allowing the pupils to engage in small-group exercises. The second hour-long session focussed on promoting a positive sense of well-being and challenging the use of stereotyping labels, such as 'looney', 'psycho' and 'nutter'. This second phase was co-facilitated by someone who had personal experience of living with mental illness; personal experiences were shared via short talks with students, and a question-and-answer segment followed (Pinfold et al. 2014).

Pupils were asked to answer 'true' or 'false' to four factual statements about mental health, with their correct responses constituting a mental health literacy rating. Prior to the workshop only 1% of students answered all four statements correctly, but correct responses rose to 24% one week after the workshop, then dropped to 6% at the six-month follow-up. The authors claimed that their results indicated a small shift in students' understanding of mental health and mental illness but noted that the workshops did not have an impact on the 'us' and 'them' phenomenon. Personal contact played a part in affecting attitude scores, suggesting that students who know someone with a mental illness learnt more or were more receptive in the workshop sessions than students who did not have that personal contact (Pinfold et al. 2014, p. 345). It is possible that the limited success of the intervention may be in part a result of the short window of opportunity provided to students to engage with the workshop material and to have contact with people who have experience living with mental illness. As the workshops were only several hours long, it is not surprising that mental health literacy dropped significantly at the six-month mark.

In summary, the effectiveness of previous interventions to reduce stigma could be attributed to a range of factors, including the combination of intervention styles, intervention duration, and the level of creative engagement elicited. It is evident that the provision of information alone is insufficient to produce long-term change, particularly in behaviour. However, as

demonstrated in the Tanzanian study, combining information with skill-building exercises potentially offers a more significant impact. Intervention duration is another aspect that may contribute to success. The intervention to reduce mental illness stigma in British students was administered over several hours, achieving a small, arguably negligible, impact several months later (Pinfold et al. 2014). By contrast, the Tanzanian study ran for a significantly longer duration of three months, allowing participants to engage further with intervention materials and providing more time for messages of acceptance to be reinforced and solidified. Furthermore, the creativity required to make posters or participate in roleplay, for example, may provide an opportunity to engage other modes of learning.

In the following section, the concept of weight stigma and evidence of its many effects are discussed in detail. This prepares the way for my development of two tools that may be used to shape future interventions to reduce stigma: the *Spectrum of Approaches to Weight Stigma* (p. 59) and the *Matrix of Anti-Stigma Intervention Strategies* (p. 66).

2.2 What is weight stigma?

'Weight stigma' refers to the stigmatisation of individuals who are perceived to be overweight or obese. As with the concept of stigma, the concept of weight stigma is complex, and establishing a precise, all-encompassing definition may be difficult. For the purposes of this thesis, I will use the term 'weight stigma' broadly to refer to the negative stereotyping, labelling, and discrimination of people who are perceived to be overweight or obese. A range of terms are used within the literature to describe seemingly the same phenomenon, and they are often used interchangeably. These terms include the 'stigmatisation of obesity' (Couch et al. 2016), 'weight bias' (Browne 2012; Puhl et al. 2008; Puhl & Brownell 2003; Schwartz et al. 2003; Washington 2011), 'fat shaming' (Farrell 2011), 'anti-fat attitudes' (Hague & White 2005; Puhl et al. 2008), 'weight stigma' (Nolan & Eshleman 2016; Puhl & Heuer 2010), 'weight-based teasing/bullying' (Neumark-Sztainer et al. 2002; Puhl et al. 2010), and 'weight discrimination' (Paul & Townsend 1995; Roehling 1999). It will come as no surprise that the issue of weight stigma is not necessarily clear-cut or readily understood, given the diverse range of ways in which it is conceptualised and researched in the literature.

The following section details empirical evidence that demonstrates the impact of experiencing weight stigma.

2.2.1 Empirical evidence and weight stigma

A substantial body of evidence demonstrates the ways in which weight stigma is harmful to individual's psychological and physical health, contributes to discrimination, and fails to motivate individuals to lose weight. In fact, weight stigma contributes to obesity and poor health. Those who are stigmatised for their weight and body size are less likely to engage in physical activity and more likely to overconsume; both of these behaviours are highly likely to contribute to further weight gain, thus perpetuating obesity. The following section canvases the empirical evidence regarding weight stigma's effects.

2.2.2 Weight stigma's harmful effects on health

The experience of weight stigma can have serious health effects, and it is important to note that these effects come on top of, and thus compound, the effects of obesity. Issues of peer rejection, weight-based bullying and victimisation, and discriminatory treatment in health care practices and employment can have significantly damaging effects on psychological and physical health. Weight-based discrimination on interpersonal levels can contribute to constrained social networks, social isolation, depression, and low self-esteem (Link 2001; Stuber et al. 2008). Unhealthy behaviours that arise in response to weight stigma, such as disordered eating, avoiding physical activity, and not seeking health care, all directly contribute to poor health outcomes. Children and young people are particularly vulnerable as these behaviours can form lifelong habits. In comparison with non-stigmatised groups, stigmatised groups share a higher risk of depression, hypertension, and cardiac diseases (Major & O'Brien 2005, p. 409). Physiological responses to perceived judgement and discrimination includes elevated cortisol levels and increased blood pressure, which can have deleterious effects on health if chronically elevated (Nolan & Eshleman 2016).

2.2.3 Weight stigma does not act as an effective obesity prevention tool

Two assumptions underlie the belief that weight stigma will encourage weight loss: (1) obesity is a modifiable medical risk factor and therefore individuals should exert personal control over their weight; and (2) weight-stigma is an effective means of motivating people to change (Vartanian & Smyth 2013, pp. 50–51). Some authors have suggested that the intentional stigmatisation of obesity may serve as a beneficial strategy achieve weight loss in individuals and thereby see a reduction in obesity rates (Callahan 2013; Freind 2012; Liddle 2013). The basic line of thought is that stigmatised individuals are marked as being outside the social norms. This leads those individuals to be treated poorly in various ways, which is unpleasant to experience, and this unpleasantness will motivate individuals to actively change to conform to social norms (Callahan 2013). In other words, if we shame individuals who are perceived to be overweight, then they will feel so uncomfortable and unaccepted that they will strive towards social acceptance by losing their excess weight. In the following section, I detail why that logic is deeply flawed, and demonstrate the ways in which weight stigma actually *perpetuates* obesity.

The literature documents a range of responses to experiencing weight stigma, many of which are likely to contribute to weight gain and undermine weight-loss goals. For example, Brewis has argued that weight-related stigma and discrimination may contribute to individual weight retention and gain through four mechanisms that probably reinforce one another (Brewis 2014).[22]

The first mechanism concerns *direct behaviour change*. Research has demonstrated that individuals who feel judged for their body size or weight are less likely to engage in physical activity, more likely to overconsume or engage in comfort eating, more likely to develop disordered eating patterns, and more likely to avoid preventative health care (Brewis 2014; Haines, Neumark-Sztainer, Eisenberg, et al. 2006; Puhl & Heuer 2010; Puhl & Heuer 2009). These effects could seriously impact dietary behaviours long-term, particularly if experienced by children (Brewis 2014; Puhl & Brownell 2003). Haines et al. (2006) conducted a study of 2516 US adolescents, demonstrating an association between the experience of weight stigma

[22] These four mechanisms are similar, yet distinct, from those developed by Link (2001). On Link's account, stigma can have negative consequences for stigmatised individuals via three generic mechanisms, whereas the four mechanisms posited by Brewis look specifically at how *weight stigma* can contribute to weight gain and perpetuate *obesity*.

(and related teasing) and the development of disordered eating at a five-year follow up. The results indicated that, five years on, boys who were teased about their weight were more likely to engage in binge-eating and unhealthy weight control behaviours, such as using laxatives and diuretics and skipping meals. Meanwhile, girls were more likely to be frequent dieters (Haines, Neumark-Sztainer, Eisenberg, et al. 2006, p. e213). Victimisation and weight stigma also decrease participation in physical activity and is reported by adolescents to be a barrier to physical activity[23], demonstrating that weight stigma may reinforce behaviours that perpetuate obesity (Puhl 2011; Salvy et al. 2011; Zabinski et al. 2003).

The second mechanism through which weight stigma can perpetuate obesity is *indirect psychosocial stress* caused by feeling stigmatised and discriminated against. Psychosocial stress can be caused when situations occur that prompt an individual to feel the threat of judgement or mistreatment based on a negative stereotype applied to them (Major et al. 2014; Nolan & Eshleman 2016). Particularly for those already overweight or obese, chronic stress can contribute to weight gain and other health complications over time (Schvey et al. 2014). This effect on weight may be explained by the arousal of the hypothalamic-pituitary-adrenal axis and sympathetic nervous system, which leads to the chronic elevation of glucocorticoid pathways. Chronic activation encourages sugar and fat-seeking behaviour, with excess calories deposited as abdominal fat (Bose et al. 2009). The experience of psychosocial stress could also undermine executive control as the individual becomes hypervigilant in monitoring for discriminatory treatment or acceptance; thus stress can contribute to obesity by reducing the resources necessary for self-control (Major et al. 2014; Major & O'Brien 2005). With limited self-control, behaviour can be influenced and individuals can be negatively impacted as a result, taking us back to the first mechanism. For example, reduced self-control could contribute to over-consumption or comfort eating behaviours.

The third mechanism concerns *indirect effects via changes in social relationships*. Stigma can contribute to weight gain if it changes the composition or quality of social networks and relationships, as peer influences can directly shape dietary and physical activity behaviours (Stuber et al. 2008). However, people with similar body shapes tend to converge within social networks. Stigma's effect on social networks is likely to lead overweight and obese people to

[23] This extends to feelings of self-consciousness about of their bodies, and not wanting to be seen by others while engaged in physical activity. (Zabinski et al. 2003)

have proportionately more overweight and obese people in their networks. For example, as a result of being socially ostracised by their peers, overweight children, and overweight adults, turn to one another for companionship, and seek out others with whom they share understanding, acceptance and emotional support (e.g. others who share their experience). Weight teasing can reinforce these processes in childhood, with non-overweight adolescents being more likely to select and prefer non-overweight friends (Bell & Morgan 2000; Musher-Eizenman et al. 2004). Overweight adolescents also prefer non-overweight friends, making this preference a major shaper of social networks (Brewis 2014, p. 154). Additionally, social rejection and isolation have been identified as factors that contribute to psychosocial stress, taking us back to mechanism two.

The final mechanism concerns the *indirect structural effects of discrimination*. In wealthier nations, lower income is associated with higher BMI and obesity. Less wealth means fewer choices and options related to diet and exercise. For example, less wealth may mean less money for expensive nutrient-dense foods, less time to prepare home-cooked meals, and less time and money to access pay-to-play sports or fitness facilities like gyms. Living in poverty and dealing with everyday resource shortages (and other layers of stigma related to race, place, or health status, for example) is also chronically stressful, reinforcing the second mechanism. In what appears to be a vicious cycle, obese individuals also report experiencing fewer training, work, education, and career opportunities in their daily lives (Puhl & Heuer 2009). These lost opportunities can perpetuate lower wages, and indeed, there is documentation of an 'obesity wage penalty', which indicates that obese individuals are paid less, even when accounting for other factors such as job performance (Cawley 2004).

To summarise, the experience of weight stigma has been shown to increase disordered eating behaviours (such as bingeing, extreme caloric restriction, and frequent dieting) and unhealthy weight control methods (such as the use of laxatives and diuretics) . The stress experienced by people who are stigmatised for their weight contributes to weight gain via elevated glucocorticoid pathways, but also by affecting behaviour in ways that prompt comfort eating, overconsumption and the avoidance of physical activity. Changes to social networks, including social rejection and isolation, can contribute to stress, which negatively impacts health. The structural discrimination that results from weight stigma, and the lost opportunities or life chances, can perpetuate low-incomes, which reduce individuals' abilities

to access healthy foods and engage in physical activity. It is evident, therefore, that weight stigma does not motivate individuals to lose weight or avoid gaining weight so much as it contributes to weight gain and prompts unhealthy behaviour. If we are to take the results of these numerous empirical studies seriously, the intentional stigmatisation of obesity or obese individuals cannot be justified as a way to reduce obesity rates, because it is counterproductive, increasing obesity.

2.2.4 Weight stigma and discrimination

As touched on above, one example of weight discrimination takes the form of friendship selection and peer rejection in children. Children as young as three years old have been shown to hold negative attitudes towards obese individuals (Cramer & Steinwert 1998). In a study with preschool children, Cramer and Steinwert (1998) examined how weight stigma affected friendship selection. The children were shown 'chubby', 'average', and 'thin' figures[24] and were asked who they would like to select as a playmate; the 'thin' and 'average' figures were selected most frequently. In a similar study, with children aged 4.0 - 6.2 years, Musher-Eisenman et al. (2004) examined three key issues: anti-fat attitudes, friendship selection, and attributions of control. To assess anti-fat attitudes, children were shown numerous scales, each with a pair of adjectives at either end and seven boxes in between. Each box was assigned a number from 1–7, with higher scores reflecting more positive attitudes. The children were shown a 'thin', 'average', or 'chubby' figure and invited to place the figure in the box they thought it belonged in. The adjective pairs included nice/mean, smart/stupid, has friends/has no friends, neat/sloppy, cute/ugly, and quiet/loud. To assess friendship selection, children were shown 18 randomly arranged figures and were asked to select three figures to be friends, and to select one as a best friend. There were at least three 'thin', three 'average', and three 'chubby' figures of each gender, so that theoretically the children could select potential friends of the same body size and gender. To assess attributions of control, children were asked five questions and were asked to respond 'yes' or 'no'.[25] A yes response

[24] The terms, 'chubby', 'average', and 'thin' were selected by the authors.
[25] The questions included: Do children have control over their weight? If a child is fat, is that his or her fault? Are children fat because they eat too much? Are children fat because they do not exercise? Can fat children become thin if they really try?

prompted a follow-up question from the survey administrator to confirm the child's response, before marking the child's response on a three-point scale (no = 0, maybe = 1, definitely = 2).

The results indicated that children of preschool age held anti-fat attitudes, and that attribution of internal control was related (i.e. the more deeply held the belief that there was personal control of overweight, the higher the level of anti-fat attitude). In the first part of the study, the 'chubby' figures received the lowest adjective ratings, indicating higher levels of anti-fat attitude (Musher-Eizenman et al. 2004). During friendship selection, 'thin' figures were chosen 39% of the time, 'average' figures 45% of the time, and 'chubby' figures 16% of the time. When asked to select a best friend, a 'thin' figure was selected 55% of the time, an 'average' figure was selected 38% of the time, and a 'chubby' figure was selected 7% of the time.

The attribution of control was linked with anti-fat attitudes but was not associated with behaviour (e.g. friendship selection). With higher scores indicating a more internal attribution of control for weight, the average score was 0.7 (of a possible 2.0). This indicates that, on average, the children attributed a low-to-moderate level of internal control for weight, meaning they generally understood that a person did not have a lot of control over their weight. Children who did hold more internal attributions of control over weight also demonstrated stronger anti-fat attitudes and negative stereotyping of 'chubby' figures.[26] The fact that these children demonstrated a general understanding that individuals are not responsible for their weight, but still demonstrated discriminatory behaviour regarding friendship selection suggests that attitudes do not necessarily–or consistently–influence behaviours. To account for this, rather than solely focusing on changing attitudes, we should incorporate behaviour regulation.

In adolescents, weight stigma also contributes to peer teasing and victimisation. A study of over 1500 adolescent students demonstrated how pervasive weight-based teasing and bullying was, with many students reporting having witnessed obese peers being made fun of, teased during physical activity, physically harassed, verbally threatened, called names,

[26] The authors noted that previous research indicated children were more sympathetic towards hypothetical peers considered to be deviant (including overweight) than they were towards actual classmates, suggesting that perhaps the level of anti-fat bias shown by this study may be underestimated

ignored or avoided, and excluded from activities (Puhl et al. 2010; Puhl 2011; Krukowski et al. 2008; Strauss & Pollack 2003). Not only do students face discrimination and weight stigma from their peers but oftentimes from their teachers and family members as well, highlighting the pervasive nature of weight stigma (Carr & Friedman 2005; Depierre & Puhl 2012; Lawrence 2010; Puhl et al. 2008).

Beyond educational settings and interpersonal relationships, the discrimination that results from weight stigma negatively affects health care and employment opportunities (Hatzenbuehler et al. 2013; MacLean et al. 2009; Puhl & Brownell 2001; Spahlholz et al. 2016). Weight stigma is documented in health care settings and can affect the ways health care professionals treat overweight patients (Swift et al. 2013). Examples of the underlying stigmatisation include the beliefs that overweight patients are weak-willed, dishonest, lazy, and non-compliant with treatment (Puhl & Brownell 2001; Puhl & Heuer 2009; MacLean et al. 2009). The discrimination that stems from weight stigma encompasses less time being spent in appointments with overweight or obese patients, and obese patients report receiving disrespectful treatment from health care providers (Bertakis & Azari 2005; Hebl & Xu 2001). Some obese patients also report that they expect to be negatively stereotyped, and this expectation can serve as a barrier to health care (Brown et al. 2006, p. 670; MacLean et al. 2009, pp. 89–90). These issues, combined with the experience of equipment such as examination tables and gowns being too small, can contribute to the avoidance of health care (Puhl & Heuer 2009; Puhl & Brownell 2001).

Similar stigmatising views are noted in the workplace: there are views that obese employees are less productive, succumb to illness more frequently, are absent more often than non-obese employees, and are lazy and undisciplined (Paul & Townsend 1995, pp. 136–137). In reviewing empirical literature on weight stigma and discrimination in employment, Roehling (1999) found that the discrimination of overweight and obese individuals was apparent during each phase of employment, including in selection and hiring practices, job allocation, promotion and wages, and termination (Roehling 1999, pp. 982–984). Ultimately, this can negatively impact wages and opportunities for career advancement (Puhl & Heuer 2009, p. 942).

In addition, weight stigma intersects with gender, age, race and ethnicity, sexual orientation, and socioeconomic class; as such, it intersects with stigma and discrimination that targets

those domains. As with weight, the experience of stigmatisation and discrimination in these domains can be chronically stressful and influence behaviour. Nolan and Eshleman (2016) have observed that discrimination, even on dimensions unrelated to weight, can prompt unhealthy food choices. A note on layered stigma is called for here. People who experience weight stigma are also likely to experience other forms of stigma, given the prevalence of obesity in lower socioeconomic areas and particular ethnicities. The experience of layered stigma can then be exacerbated by public health policy, which may result in stigmatised individuals being disproportionately burdened. For example, a popular intervention strategy is the taxation of particular food items, such as the 'Fat Tax' in Denmark (Abend 2011). The taxation of foods disproportionately affects poorer families and communities and may also be inadvertently stigmatising. For example, the purchasing of taxed foods may be viewed as irresponsible behaviour in terms of both living beyond one's means and purchasing unhealthy food (MacLean et al. 2009, p. 92). The obese, poor person is stigmatised twice over.

If public health intentions are to prevent disease and promote health, then it is difficult to see how the intentional utilisation of weight stigma, or even the unintentional perpetuation of weight stigma, can achieve those intentions. From prompting behaviours that contribute to and perpetuate obesity, to reducing opportunities in education and employment, and increasing the avoidance of necessary primary health care, weight stigmatisation is a dangerous barrier to health improvement. If we are to take this wealth of empirical evidence seriously, then the need for stigma reduction is clear. Fortunately, there is a growing voice in the literature calling for this to be done, and some attempts to reduce weight stigma have been made. In the following section, I outline and discuss the nuances between several positions to address weight stigma, which includes the call to combat weight stigma directly.

2.5 A Spectrum of Approaches to Weight Stigma

A range of opinion regarding how to deal with weight stigma can be seen within the academic literature and in proposed and implemented interventions to prevent obesity. At one end of the *Spectrum* are writers who encourage the use of weight stigma as a motivational tool or strategy for weight loss and management. At the other end are writers who argue that stigmatisation is not only ineffective as a weight loss tool but actually harmful and therefore

it ought to be combatted directly (see Fig. 1). Other positions logically available include unintentionally utilising or perpetuating weight stigma, unintentionally avoiding utilising or perpetuating weight stigma, intentionally avoiding utilising or perpetuating weight stigma, and unintentionally combatting weight stigma. I now discuss each of these positions.

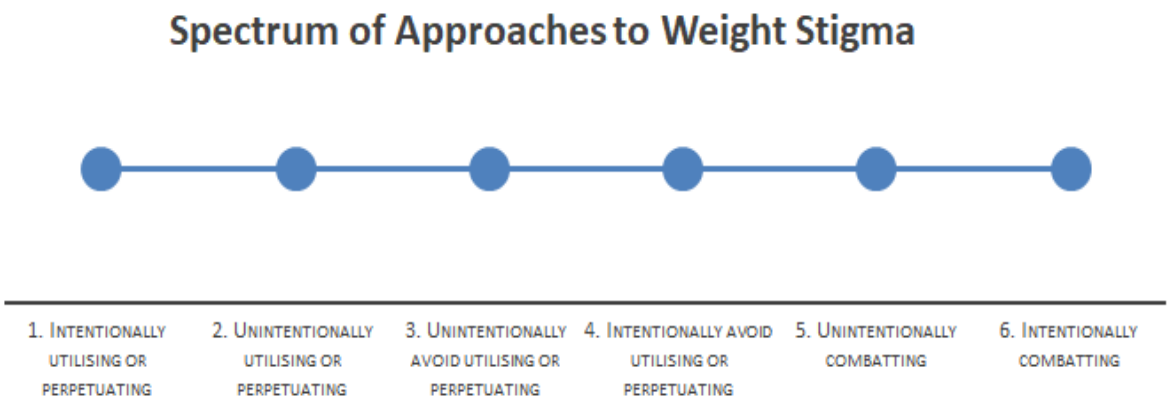

Figure 1

As noted above, the first position on the *Spectrum* is *intentionally utilising or perpetuating* weight stigma as a motivational tool to reduce obesity. Callahan (2013) argues for the use of "social pressures" in a bid to prevent obesity, referring to the active and intentional stigmatisation of individuals perceived to be overweight and obese. He claims that the application of social pressure is one of the three most promising obesity prevention approaches, the other two being childhood prevention programs and the use of strong (and most likely coercive) public health measures (driven predominantly by government but also business).

Callahan draws an analogy between the use of social pressure to prevent obesity and the 'success' of anti-smoking campaigns, admitting that the 'force of being shamed' and being 'beat upon socially' to stop smoking were as persuasive to him as threats to his health (2013, p. 38). Based on this analogy, he goes on to argue that the prevention of obesity, with its serious health and financial impacts, is ample justification for the strategic use of weight stigma. Nonetheless, Callahan acknowledges another important point—that smoking is a *behaviour*, whereas weight and body size are not. Indeed, he notes that weight and body size

are closely linked to character and selfhood (2013, p. 38), and so to attack those features is to attack *people*. However, he argues that unless we bring some social pressure to bear against obesity, the chances of making progress are low, since society would need to make changes to almost all aspects of life simultaneously. Social pressure, he claims, will push the public to accept strong government interventions that would see them change the way they eat, exercise, and work (Callahan 2013, p. 39).

The second position on the *Spectrum*, *unintentionally utilising or perpetuating* stigmatisation as part of efforts to reduce obesity, is demonstrated in a number of health campaigns and interventions. One such campaign focuses on the prevention of childhood obesity, and is run by a children's health care group, Strong4Life™. The group aims to support parents in raising healthy children, and does so with the provision of information and resources for parents, training health care providers, and working with schools and communities.[27] The campaign in question featured a video in which overweight children asked their overweight parents various questions about the complications that arise from carrying excess weight, as well as a series of billboards that depicted black and white photographs of overweight children with various captions such as "It's hard to be a little girl if you're not", "Chubby isn't cute. It leads to diabetes", and "Big bones didn't make me this way. Big meals did".[28] These messages, and others aimed at the reduction or prevention of obesity, have the capacity to stigmatise individuals and specific groups, even if this is unintended. People perceived to be obese have long suffered from being stereotyped as lacking discipline and being prone to make unhealthy life choices. As discussed, this stigmatisation can be exacerbated by a policy focus on personal responsibility. Any policy focus on personal responsibility is mislaid to the extent that many genetic and environmental factors beyond the scope of personal responsibility contribute to weight gain (Byrne & Niederdeppe 2012; MacLean et al. 2009; Saguy & Riley 2005).

The third position is to *unintentionally avoid utilising or perpetuating* weight stigma. Intentions can be intrinsically difficult to ascertain, unless they are discussed openly or are blatantly obvious in other ways. In this context, it is plausible to imagine health campaigns, programs, and interventions that unintentionally avoid the perpetuation of weight stigma simply by virtue of their communication of accurate information about obesity and obese

[27] http://www.strong4life.com/what-is-strong4life
[28] https://www.youtube.com/watch?v=OA8wmjSHcAw

individuals. In other words, despite not deliberately avoiding the utilisation or perpetuation of weight stigma, they manage to do so.

The fourth position, to *intentionally avoid utilising or perpetuating* weight stigma, involves giving consideration to existing weight stigma and ensuring that messages conveyed by the intervention or campaign do not exacerbate that stigma. This requires an understanding that weight stigma is prevalent in Western culture[29] and a conscious effort to not contribute to or worsen that stigma. For example, Maclean et. al (2009) provide a set of recommendations to guide public health officials in the development of obesity prevention policy. These recommendations include the evaluation of interventions for their impact on stigma. The authors provide the example of school-based approaches that measure changes to self-esteem and body image before, during, and after intervention.[30] Maclean et. al (2009) also note the importance of considering when targeted approaches may be harmful, instead of helpful. In some instances, overweight and obese individuals may require specialised provisions or it may be more cost-effective to target particular groups directly. For example, exercise classes or groups specifically designed for people with excess weight may be motivating, in that they could provide a sense of comradery for participants and lower the self-consciousness that may have previously been a barrier to physical activity. However, targeted intervention may imply that a particular group or sub-population is in need of 'fixing' and this has the potential to be stigmatising ("Oh, you have to go to *that* class") (MacLean et al. 2009, p. 90). Recommendations include: education and training for professionals, such as doctors, nurses and educators, about stereotyping (MacLean et al. 2009, p. 91); the provision of positive coping strategies for stigmatised individuals; consistency and coherency in non-stigmatising messages across sectors and segments of intervention (MacLean et al. 2009, p. 92); and the use of meaningful stakeholder engagement as an effective way to keep the minimisation of stigmatising effects in focus or 'on the table' (Saguy & Riley 2005). Finally, in an effort to reduce the layering of stigma, MacLean et al. propose that the implementation

[29] It is less so in other cultures, such as Pacific Island nations [invites a reference] or countries in which large body size is indicative of wealth, status, or the ability to withstand famine. For the purposes of this argument, the focus is on (predominantly Western) countries with anti-fat cultures.

[30] This may be helpful in gauging the likelihood of stigmatising messages in future interventions, but it may not help the present intervention greatly to simply measure and note any changes. If there are declines in self-esteem and body image, the damage of stigmatising messages is already apparent. At the very least, these measures will provide an alert for when action is needed to counter any loss of self-esteem/body image.

of system-level approaches, that take into account the many determinants of population health, are one way to prevent the stigmatisation of minority groups (MacLean et al. 2009, p. 92).

The fifth position on the *Spectrum* is *unintentionally combatting* weight stigma. It is possible that weight stigma may be combatted unintentionally. For example, stigmatising messages about obesity and obese individuals may be successfully countered through the positive portrayal of overweight and obese individuals (demonstrating success, intelligence, or determination, for instance). Positive representations irrespective of excess weight may work to undermine the pervasive and negative messages that are currently abundant in mainstream media and other public forums.

The sixth position, *intentionally combatting* weight stigma, embodies the claim that weight stigma is harmful and therefore ought to be actively combatted and reduced. As noted in previous sections (2.2.1–2.2.4), a large body of empirical evidence lends support to this position. Weight stigma has deleterious effects on physical and mental health in a range of ways. According to Hatzenbuehler, Phelan, and Link, stigmatisation acts as a fundamental cause of inequality, in that ". . . the accumulated literature makes a compelling case that stigma represents an additional burden that affects people above and beyond any impairments or deficits they may have" (Hatzenbuehler et al. 2013, p. 814). Therefore, there are increasing calls in the literature for the reduction of weight stigma.

What follows is a discussion of interventions to reduce weight stigma in line with the sixth position on the *Spectrum*. Several interventions have been implemented to reduce weight stigma, with mixed success. However, despite implementation of these interventions, no significant reductions to weight stigma have been achieved, as I explain below.

2.6 Previous interventions to reduce weight stigma

Research has demonstrated that simplistic beliefs about obesity aetiology contribute to weight stigma, especially the beliefs that obesity is a result of laziness, gluttony, and a lack of self-discipline and that accordingly overweight individuals should be held responsible for their weight (Bell & Morgan 2000; Dejong 1993; Dejong 1980; Musher-Eizenman et al. 2004). To counter those beliefs and thereby reduce weight stigma, approaches that provide accurate

information about obesity and obese individuals have been implemented. Interventions to reduce weight stigma amongst young children have been used in several instances. The early years of life are very formative, suggesting that the formation of negative attitudes (inclusive of weight stigma) may occur at a young age (Cramer & Steinwert 1998; Stager & Burke 1982). This represents a prime opportunity for intervention, therefore.

An anti-weight-stigma intervention that relies on the provision of factual information regarding obesity causation, highlighting the ways in which individual responsibility is constrained and undermined, may have a positive impact on knowledge of obesity. However, despite positive changes in beliefs and attitudes, there is evidence that corresponding behaviour change does not always follow—children still do not want to be friends with the 'chubby' kid, even though they tend to recognise that people have limited control over their weight (Musher-Eizenman et al. 2004). 'Very Important Kids' was an intervention designed to reduce teasing and weight stigma in children in grades four, five and six. It incorporated an after-school program and theatre production for students, staff training, a no-teasing campaign, and various levels of familial and parental involvement. The successes of the intervention may be attributed to the fact that so many students participated and that the messages of the intervention were sustained and consistent (Haines, Neumark-Sztainer, Perry, et al. 2006, p. 890). However, while the intervention saw positive results in the reduction of overall teasing, the reduction of weight-based teasing was minimal (Haines, Neumark-Sztainer, Perry, et al. 2006).

Eating Disorders Awareness and Prevention (EDAP) developed a puppet program for children aged 6-10 years to promote acceptance of a diverse range of body shapes, healthy attitudes about food and eating, and a healthy self-concept (Irving 2000). The program utilised 'scripts' to address issues that contribute to disordered eating, including emotional distress, body acceptance and dieting (Irving 2000, p. 223). As a novel approach to the reduction of weight stigma and issues of body acceptance, the EDAP puppet program showed promising results. Student evaluations indicated that the program successfully discouraged teasing (in all forms, not just related to body shape and size) and encouraged students to treat everybody well, including themselves. Negative attitudes towards larger bodies were also reduced as larger bodies were evaluated more favourably post-program. It is possible that the creative engagement with students contributed to the success of this program. Its focus on

behaviours, primarily teasing, is also worth noting. These studies suggest that interventions that have a strong focus on the provision of information and changing attitudes may be less effective than other interventions that utilise a combination of intervention styles, as seen in the Tanzanian study of HIV/AIDs stigma discussed earlier (Klepp et al. 1997).

Recalling the interventions to reduce stigma related to HIV/AIDS and mental illness, it is worth observing what features of those interventions may have contributed to their effectiveness, namely with a view to replicating those features in interventions to reduce weight stigma. The important features seemed to be intervention duration, creative engagement, and the use of a combination of intervention styles. Building on this, I will provide recommendations for intervention approaches to reduce weight stigma and develop a *matrix* to assist in the development of anti-stigma interventions (see p. 66). For example, it is possible that a sustained intervention that includes information provision and the creative engagement of participants can combat the first generic mechanism of stigma, *direct discrimination,* namely by allowing participants to develop empathy and a better understanding of the stigmatisation and discriminatory treatment of others.

2.7 How might the successes of previous stigma-reducing interventions be utilised in the case of weight stigma?

Three main strategies to combat stigmatisation have been previously identified, and can be implemented in a number of ways: (1) *Protest* strategies aim to "suppress negative representations and attitudes"; (2) *Contact* strategies facilitate interactions between citizens and members of the stigmatised group; and (3) *Education* strategies aim to improve knowledge of stigmatised issues in attempts to reduce related stigma (Corrigan et al. 2001, pp. 187–188). In reviewing interventions to reduce AIDS/HIV-related stigma, Brown, Macintyre, and Trujillo (2003) categorised four styles of intervention that, in my assessment, exemplify two of the three strategies. Interventions that provided 'contact with affected persons' was an example of a *Contact* strategy. Interventions that included the provision of information ('information-based') and 'skill-building' were examples of *Education* strategies. To increase the effectiveness of strategies to combat stigma, I recommend the inclusion of a fourth category, *Coercion,* to provide scope for legal and regulatory approaches. For this

reason, in discussing possible interventions to reduce weight-stigma, I discuss four strategies: *Protest, Contact, Education,* and *Coercion.*

In thinking about how to reduce weight stigma, it is important to recall the three generic mechanisms by which stigmatisation can have negative consequences for the stigmatised. As proposed by Link (2001), these three mechanisms are *Direct discrimination*, *Structural discrimination*, and *Psychological Processes operating through the stigmatised person* (*Self-Stigma*). It is helpful to consider approaches that will address each mechanism. The discussion of possible interventions that follows illustrates how the combination of four anti-stigma intervention strategies with three generic mechanisms of stigma might be used to plan anti-stigma interventions.

What follows is a *Matrix of anti-stigma intervention strategies* that may prove useful in developing and implementing targeted interventions to reduce weight stigma and potentially other forms of stigma (see Table 1)[31]. I also offer a detailed discussion of what each intervention strategy might encompass. I have chosen to focus on the three mechanisms proposed by Link (2001) for simplicity and to increase the transferability of the *Matrix* to stigmas other than weight stigma. Targeting the mechanisms by which stigma operates with the strategies detailed previously (section 2.1.1) provides a unique opportunity to mitigate against the deleterious effects of weight stigma.

[31] The table provides examples of strategies to directly address the general mechanisms through which stigma operates and contributes to discrimination, but it is not an exhaustive list of the possibilities.

***Matrix of Anti-Stigma Intervention Strategies*[32]**

GENERIC MECHANISM → INTERVENTION STRATEGY ↓	DIRECT DISCRIMINATION	STRUCTURAL DISCRIMINATION	PSYCHOLOGICAL PROCESSES (SELF-STIGMA)
PROTEST	Condemning discriminatory behaviour; Lobby groups;	Lobby groups; Advocacy groups; Organised boycotts	Advocacy groups; Online forums and blogs
CONTACT	Positive examples of abilities and successes achieved by overweight individuals	N/A	Support groups; Social clubs
EDUCATION	Fair treatment practices; Information about the harms of labelling and stereotyping	Individual rights to fair treatment; Legal requirements	Explain self-stigma process; Self-esteem building; Cognitive behaviour therapy; Coping skills
COERCIVE	School / workplace policies and regulation; Punitive measures for non-compliance	Legislation; Regulation; Sanctions;	N/A

Table 1

[32] To increase transferability, this *Matrix* is able to be used by a number of actors or agents including governments, non-government organisations, advocacy groups, and individuals. Some actors will be more prominent than others in some of the anti-stigma strategies. For example, government will be more prominent regarding the implementation of law and regulation, whereas individuals are more likely engage with the use blogs and support groups. The government may also provide support or funding to such groups, or education campaigns that are administered by other agents (e.g. schools).

2.7.1 Protest strategies

As discussed by Corrigan et al. (2001), the purpose of *Protest* strategies are to "*suppress negative attitudes and representations*" (2001, p. 188). Insofar as negative attitudes and representations contribute to discriminatory behaviour (often serving as a foundation of it), lobby groups and advocacy groups can protest and speak out against discriminatory policies and processes, and may also provide the impetus to make changes and inclusions in anti-discrimination legislation and policies (i.e. justified coercion).

In addressing *Self-Stigma*, advocacy groups may speak out against misrepresentation, inaccurate information, negative stereotyping, and stigmatising messages communicated via media, for example. This could be done via directly contacting the companies that are communicating stigmatising messages, utilising social media to raise awareness of how stigmatising messages are problematic, or contacting surveillance bodies directly to voice concerns. For example, in Australia any concerns or complaints regarding news, television shows, or advertisements shown on television can be directed to the Australian Communications and Media Authority (ACMA). In contacting authorities, like the ACMA, it is possible that the communication of stigmatising and otherwise harmful messages will be eliminated. The elimination of overt messages of weight stigma may be beneficial, as there would be fewer sources available to reinforce and perpetuate self-stigmatising beliefs.

A less formal approach may be to utilise online blogs, such as Fit is a Feminist Issue[33]; Fit Fatties Forum[34]; Fierce, Free-thinking Fatties[35]; Fat Heffalump[36]; and Health at Every Size[37]. These forums provide a positive space for support, the exchange of ideas about health at every size, fat acceptance and body acceptance, and a place to discursively resist the weight-stigmatising experiences and messages that subscribers and bloggers encounter in their daily life. This may also work as a *Contact* strategy in allowing subscribers to share and communicate experiences and support.

[33] https://fitisafeministissue.com/author/cawmit/
[34] http://fitfatties.ning.com/
[35] https://fiercefatties.wordpress.com/fatties/
[36] https://fatheffalump.wordpress.com/
[37] https://healthateverysizeblog.org/

2.7.2 Contact strategies

The nature of contact[38] with affected groups is significant, particularly regarding weight stigma. As noted by Brewis (2014), weight stigma can have indirect effects on social networks. Given the prevalence of obesity, it is likely that many individuals have *some* contact with overweight or obese individuals, whether it be through interpersonal relationships or just in navigating the outside world. However, it is not necessarily the case that such contact promotes acceptance and tolerance, and therefore the *nature* of contact is significant: having positive contact with overweight people who are successful, intelligent, charismatic, and so on, may help to counter the stigmatising beliefs that contribute to mistreatment and stereotyping. In schools, this could be particularly beneficial, as children may be more receptive to messages of acceptance, before stigmatising beliefs become too entrenched. This may also be helpful in addressing *Self-Stigma,* as having positive contact with other individuals who are overweight or obese might help tackle the internalised negative messages. For example, this may include the subscription to and engagement with online blogs or participation in support groups, and having contact with other people who are physically similar or share similar experiences–and seeing them as successful and capable–may help counter self-stigma.

2.7.3 Education strategies

In addressing *Direct Discrimination*, in schools and workplaces for example, it would be important for all—teachers, students, management, and support staff—to receive education and training about the fair treatment of others and the importance of not discriminating against individuals (e.g. discrimination based on appearances). Maclean et al. also note the importance of education and training for professionals, such as doctors, nurses and educators, about stereotyping (MacLean et al. 2009, p. 91). It is well documented that educational approaches to the reduction of weight stigma are resoundingly ineffective (Bell & Morgan 2000; Musher-Eizenman et al. 2004; Sigelman 1991; Sigelman et al. 1986). This may be, in part, because educational interventions were not administered for long-enough periods of time, or not in conjunction with other intervention styles that might permit the

[38] Contact may occur in person, or via electronic means such as video recordings.

development of empathy, for example roleplay or contact with affected groups. In addressing *Structural Discrimination*, this approach might utilise a legal 'lens' in educating managers, teachers, and health care providers about the rights of individuals to be treated fairly and about the legislation in place to protect those rights. If the education was one that reinforced messages about the avoidance of stereotyping and stigmatisation, provided accurate information, and was reinforced for a longer period of time, it might be more successful. Addressing *Self-Stigma* may include explaining psychological processes, highlighting that negative messages from external sources–such as the media–can influence how we perceive ourselves, as well as promoting general self-esteem building. Perhaps explaining the process of the internalisation of stigmatising messages may help to establish or reinforce that one's self-stigmatisation is not an accurate reflection of individual worth, capabilities, attractiveness, success, or intelligence. Programs and initiatives that focus on the development and acknowledgement of abilities, skills, and characteristics are also of benefit. Approaches like this can communicate and reinforce that a person's appearance is not indicative of their strengths, kindnesses, and capabilities.

The availability of counselling in schools and workplaces could further provide support for, and the provision of, coping skills and techniques for individuals victimised by weight-related teasing or discrimination, as well as support for behaviour change for those who may treat others unfairly. If, to address *self-stigma*, health care providers were made more aware of self-stigmatisation, then perhaps when dealing with patients they could better monitor for issues such as low self-esteem and body dissatisfaction, and recommend counselling services if necessary. Explaining to patients the processes by which *self-stigma* occurs may be beneficial by allowing stigmatised individuals to fully internalise the idea that negative stigmatising messages are not an accurate reflection of their capabilities or self-worth.[39]

2.7.4 Coercive Strategies

Coercive intervention strategies may include the use of regulation and legislation to address issues of *direct discrimination* and *structural discrimination.* In addressing *direct*

[39] It is worth noting, that, intellectually understanding this may not impact on one's sense of self, or how one feels. Much like the intellectual understanding that moths are harmless fails to impact the sense of fear elicited when moths are encountered by someone suffering from *mottephobia*.

discrimination in schools and workplaces, the implementation and enforcement of policies has the potential to moderate behaviour and reduce the incidence of discriminatory behaviour and poor treatment of others. For example, this could include anti-bullying and 'fair go' (or inclusive) practices. The regulation of behaviour may be the most effective way of combating interpersonal discrimination, as it would not necessarily require extensive information provision or skill-building. For example, the ability to reason with and logically explain the appropriateness of behaviour with small children can be quite difficult as they tend to lack the faculties necessary to comprehend such information. The use of other techniques, such as the removal of a favoured toy or the issuing of time out, can be a far more effective approach to discourage and modify undesired behaviours. Examples of these kinds of initiatives are also seen in adulthood, such as the issuing of written warnings or expiation notices and fines. Coercive intervention strategies to address *Structural discrimination* may utilise legislation and regulation such as equal opportunity acts; these are already in place regarding ethnicity and disability, particularly in the Australian government sector. Legislation can protect individuals from unfair treatment, and ensure fair processes are undertaken, for example, in relation to corporate hiring practices. However, it is not sufficient to have these acts and policies in place. To ensure the policies achieve their intended results, protocols that demonstrate honesty, accountability, and openness ought to be used to ensure that policies are being implemented and followed correctly. Additionally, it is important that such policies are *enforced.* As an example, a local outdoor shopping mall in Adelaide, Australia, was recently declared to be a smoke-free zone. Whilst this represents a positive step for public health, the legislation is largely unenforced and thus the impact of that legislation is not as powerful as it could have been if there were a monitoring authority in place to ensure that the legislation was followed by patrons of the mall. From this example, it is clear that it is insufficient to have legislation in place, but that it needs to be enforced.

2.8 Conclusion

Extensive empirical evidence has consistently demonstrated the damaging effects of weight stigma. Experiencing weight stigma contributes to poor health in a range of ways, including in the development of disordered eating and in acting as a barrier to physical activity and access to health care. Weight stigma also perpetuates weight gain and retention. It contributes to

weight discrimination, which has its own suite of deleterious effects that may compound burdens felt by stigmatised individuals. For example, weight discrimination may take the form of peer rejection and social isolation; teasing and bullying; and the loss of opportunities across many domains such as education, employment, and health care. Not surprisingly, given these effects, the strategic use of weight stigma to motivate weight loss and prevent obesity is ineffective. Furthermore, these effects indicate that weight stigma is a threat to health, and one that needs to be seriously considered and addressed. Before doing so, however, it is first important to acknowledge the scope and variances of the opinions on the issue.

In evaluating the approaches to weight stigma reported in the literature, the existence of nuanced variations between each approach can be seen. By categorising these approaches and placing the categories along a *Spectrum* (Fig. 1) we can better identify and understand the points of difference and similarity between them. If we, as public health officials, genuinely desire to improve health, then we ought to take seriously the empirical evidence of the effects of weight stigma, including the threat it poses to health and the reduced quality of life for those who experience it.[40] Following this, I argue that the position we ought to take is that weight stigma needs to be directly combatted to reduce its negative effects (the sixth position on the *Spectrum*). More broadly, the *Spectrum* can be applied and utilised to detail variances in the views and opinions pertaining to other stigmatised public health issues, such as mental illness.

As illustrated by the *Matrix of Anti-Stigma Intervention Strategies*, there are a range of ways that weight stigma can be directly combatted, specifically by targeting the generic mechanisms through which stigma operates. As the *Matrix* is not specific to one actor or agent, different actors may be more prominent regarding which mechanism is targeted, and which strategy approach is adopted (i.e. depending which 'box' in the *Matrix* is used). This flexibility also allows for government to mobilise other actors–such as non-government organisations or lobby groups–to combat stigma in some ways. Therefore, government could plan policy and draw on the cooperation and support of other agents.

[40] It follows that even those who are not public health officials, but have an interest, stake in, or duty to, work toward the improvement of health–individual or population–ought to take seriously the empirical evidence of the effects of weight stigma, too.

To address the mechanism of *direct discrimination*, a *coercive strategy* may be utilised to reduce and prevent workplace or school yard bullying and victimisation. For example, rules and policies can be developed and implemented to prescribe behavioural expectations and punitive measures can be used to discourage deviation from these expectations. Whilst it is difficult to change deeply held attitudes and beliefs, it is possible to regulate behaviour *qua* the expression of those attitudes and beliefs. Similarly, to address the mechanism of *structural discrimination* a *protest* strategy may be utilised, for example, via organised boycotts of businesses or companies that stigmatise overweight and obesity. To address the generic mechanism of *social psychological processes operating through the stigmatised person (self-stigma)* a *contact* strategy may be utilised. Support groups and social networks may be useful in countering harmful stigmatising messages and can work towards reducing self-stigma by providing positive experiences and support.

Additionally, the *Matrix of Anti-Stigma Intervention Strategies* has potential for broader application. Given that the mechanisms through which stigma operates have already been identified by Link (2001), it may be a relatively straight-forward process to apply the *matrix* to address other forms of stigma (e.g with regard to the stigmatisation of HIV/AIDS, mental illness, intravenous drug use, and so on).

Again, although it is difficult to change deeply-held attitudes and beliefs, changing those attitudes and beliefs will be nonetheless an important step in addressing weight stigma. The development and implementation of the strategies presented in the *matrix* may contribute to long-term change, by way of 'trickle-down' effects for generations to follow. For example, as the expression of stigmatising attitudes and beliefs (e.g. discriminatory behaviour) is regulated and less accepted, it is possible that the underlying attitudes and beliefs will shift over time.

Conclusion

In this thesis, I have analysed the issue of weight stigma within the context of public health and obesity prevention policy, providing recommendations about how weight stigma might be directed combatted. To do this, I have reviewed the relevant literature and developed two tools to assist with addressing weight stigma: the *Spectrum of Approaches to Weight Stigma (see p. 59)*, and the *Matrix of Anti-Stigma Intervention Strategies (see p. 66)*.

In the first chapter, I developed criteria that a government's public (performative) identification of a public health concern must meet to be ethically justified, and I demonstrated the application of these criteria using obesity as a case study. The criteria were as follows: (1) individual action (as distinct from collective and government action) must be insufficient to address the concern; (2) effective and beneficial action must be feasible following the identification; and (3) the identification must not result in unacceptable harm. In evaluating the ethical justification of the performative identification of obesity as a public health concern, I concluded that, whilst obesity met the first criterion, it failed to meet the two remaining criteria. As a result, governments have not been ethical justified in publicly (performatively) identifying obesity as a public health concern. We may now ask, "what do we do from here?", since obesity has already been identified in this way. I proposed that a focus on alternative aspects of the causal chain of obesity may provide ethically acceptable approaches to health promotion and improvement. Such alternatives could include a focus on the proliferation of calorie-dense nutrient-poor foods, sedentary activity, or weight stigma.

In the second chapter, I concentrated on the issue of weight stigma, as it not only contributes to obesity by way of acting as a barrier to healthy behaviours (such as exercising and healthy eating) but has a lengthy list of deleterious effects for those who experience weight stigma. For example, these harmful effects include the development of disordered eating, exercise avoidance, difficulties in accessing health care, interpersonal discrimination, social isolation, and opportunity losses in areas of education, employment, and training.

Also in the second chapter, I analysed the issue of weight stigma in greater detail, with a view to providing recommendations for how we should move forward in combatting weight stigma

directly. To do this, I reviewed relevant literature and developed the *Spectrum of Approaches to Weight Stigma* to categorise the nuanced variations between approaches expressed in the literature or otherwise logically available. I identified six key approaches to weight stigma: (1) Intentionally utilising or perpetuating; (2) Unintentionally utilising or perpetuating; (3) Unintentionally avoid utilising or perpetuating; (4) Intentionally avoid utilising or perpetuating; (5) Unintentionally combatting; and (6) Intentionally combatting. I argued that if, as public health advocates and officials, our desires to improve health are genuine, then we should hold the sixth position on the *Spectrum* and seek to intentionally combat weight stigma. To provide recommendations of how this might be achieved I looked to other areas in public health that have sought to reduce stigma, including HIV/AIDS and mental illness. From this, several intervention strategies were noted: *Protest, Contact,* and *Education.* To allow for legislative and regulatory measures, I proposed a fourth strategy: *Coercion*.

By examining specific interventions to reduce stigma, and literature on how stigma and weight stigma operate, I established is the importance of recognising how weight stigma contributes to discriminatory behaviour. Understanding the mechanisms of stigma is pivotal when it comes to the development of anti-stigma interventions. Link (2001) identified three mechanisms: *Direct discrimination* (e.g. interpersonal); *Structural discrimination* (e.g. inequalities in opportunities for education, employment, and so on); and *Psychological processes operating through the stigmatised person* (e.g. internalisation of weight stigma by the stigmatised person). By combining these three mechanisms with the four intervention strategies, I developed the *Matrix of Anti-Stigma Intervention Strategies*. This *matrix* allowed for systematic identification of specific intervention strategies to target each mechanism directly. The *matrix* may also enable the identification of gaps in approaches in any intervention and prompt the development of strategies to address those gaps.

Based on the above, I therefore argue that there ought to be a shift in public health approaches in addressing obesity and weight stigma. More specifically, current approaches that target obesity directly ought to be refocused on other aspects of the causal chain, such as weight stigma. This shift away from targeting obesity directly will itself help to combat weight stigma, as the focus on individual responsibility and control will be diminished and refocused elsewhere. For example, *coercion* intervention strategies may instead focus on (legally or ethically) acceptable treatment of others. Policymakers responsible for the

development of public health policies should be more aware of where proposed and implemented policies are positioned on the *Spectrum.* Additionally, there ought to be a concerted effort made by public health officials to combat weight stigma (e.g. exemplifying the sixth position on the *Spectrum*), and this could be done by reference to the *Matrix of Anti-Stigma Strategies* to identify policy possibilities and gaps.

I acknowledge that my research has been confined to an exploration of obesity and weight stigma within the context of an industrialised Western society. As such, the issues raised are likely to differ in developing countries and across cultures. Contextual differences will contribute to variations in views and opinions—including the very construction of excess weight as problematic—which may drastically affect public health approaches. My interrogation of these issues was also inevitably shaped by my disciplinary training in philosophy and public health and my personal experiences and perspectives. Thus, any future research conducted within different disciplines or contexts may well focus on other aspects of weight and weight stigma.

Certainly, further research on anti-stigma interventions is warranted, particularly with a focus on the development of interventions to combat weight stigma. As an example, future research could identify options for interventions in addition to those listed in the *Matrix*. Even more beneficial would be research into the development, implementation, and evaluation of the intervention strategies listed in the *matrix*. The newly proposed *Spectrum of Approaches to Weight Stigma* and *Matrix of Anti-Stigma Intervention Strategies* may also benefit from further exploration and fine-tuning, particularly for use with other stigmatised concerns, especially within a public health context, including mental illness, HIV/AIDS, intravenous drug use, or sex work. For example, *education* and *contact* strategies have been implemented to reduce the stigmatisation of mental illness, but in referencing the *Matrix* there is still scope to develop and implement interventions based on other strategies including *coercion* and *protest.* Similarly, the *Spectrum* could operate to document and evaluate nuanced variations between views of mental illness stigma in the literature.

Much of the discussion of obesity has occurred through the lens of prevention and rate reduction, particularly with a view of individual control. Popular advice includes the suggestions to ‘eat healthy’ and ‘exercise more’, and approaches that impact individuals (rather than industry) have been popular, such as taxation. Framing obesity as the result of

individual behaviour perpetuates weight stigma, as overweight and obesity are thus understood to be individual failings or the result of poor behaviour—and thus people with excess weight are seen to be undisciplined or lazy. As the stigmatisation of obesity (weight stigma) has so many harmful effects on physical and mental health, it is ethically unacceptable to adopt strategies or approaches that will utilise or perpetuate weight stigma. What we should adopt instead are strategies and approaches that actively combat weight stigma to mitigate its harmful effects on health and well-being, whilst providing support for those who experience weight stigma.

* * * * *

Four years after commencing my post-graduate research, I returned to the food court in which my interest in this topic had been spurred after witnessing an enactment of weight stigma. Although there had been changes to the food court's layout and appearance, the same type of food was still on offer: McDonald's™, KFC™, yiros, Japanese cuisine, Subway™, and various others. As I sat down, in roughly the same location as four years prior, the first thing I noticed was the difference in the demographic. Truthfully, my first thought was, "It must be pension day". Looking around at the tables and queues, I noticed a sea of grey and silver hair. It was remarkably different to the demographic that was represented when I had been there last, which had consisted mostly of younger and middle-aged people: university students, young families, and so on. Additionally, this time around, there were many more secondary school students, probably out on lunch breaks or during free periods of school. However, there were also notable similarities. It was still altogether a busy and bustling food court. All of the take-away eateries had people milling about and ordering meals. There was a steady stream of customers at McDonald's™, and as I looked at the surrounding tables, there were many people with various wrappers, containers, and items sporting the 'golden arches'.

Very few people were visibly overweight, unlike the family that had received such negative attention from the couple behind them in the queue. There were perhaps a handful of middle-aged or older people, carrying a little 'extra padding'—that pot belly that seems to come with age—but nothing out of the ordinary. Nothing that would warrant any extra attention.

As I sat observing, pen in hand, I noticed a table of four elderly men and women sitting down at a table littered with KFC™ containers and wrappers. There were burgers, cans of soft drink, boxes of chips, buckets of chicken, potato and gravy—quite the spread. What caught my eye about this table was two-fold: The first thing that struck me was their appearance. They seemed to have been living rough; I believed them to be homeless. They were slightly dishevelled, all were missing their teeth, and they were each bundled up in the layers I suspect they needed to keep warm in the middle of winter. The second thing that struck me, was how *happy* they seemed. I watched them as they enjoyed their food, and thought to myself, "Now *they* are happy meals". They ate, chatted, and laughed together. I wondered if perhaps this opportunity to sit together, inside in the warmth, and share a hot meal was one of the glimmering moments of happiness and pleasure they might enjoy, in what would have to be a difficult life.

As I turned back to the constant flow of McDonald's™ customers, two young boys caught my attention. They were of primary school age, perhaps nine or ten years old, at that stage where they seem to be all arm and leg. "He's a stick insect!" my mum often said about my brother when he was that age. They stood together, waiting excitedly off to the side of the McDonald's™ counter, presumably awaiting their orders. It made me think about the trips I had made to McDonald's as a child, usually with my parents and brother, but often with cousins and friends—especially when it was time to celebrate a birthday! Absolute joy. As their orders were finished, the two boys were each given a brown paper bag, which they clutched in their hands. I watched as they returned to their table, smiling from ear-to-ear, their delight was unmistakable!

The noticeable shift in the ages of demographic got me thinking. I wondered if, perhaps, fast food was one of the few affordable treats available to our pensioners (and vulnerable populations, in general). There were many tables with groups of elderly men and women eating meals together, talking, and laughing. Perhaps grabbing a meal in the local food court was one of the most affordable ways to spend time socialising with friends and loved ones?

Cost needn't be the only reason McDonald's™ was so popular, it may be that the burgers are delicious, but it did strike me that perhaps cost was a genuine constraint and that this was one way they could enjoy a lunch out.

Whilst this was an incredibly different experience to the one I had shared four years prior, it was nonetheless thought provoking. I hadn't witnessed enacted weight stigma, or judgement about food choices, but I did notice the *meaning* (and joy) that consuming fast food may bring. It was this thought that resonated with me, particularly in relation to our more vulnerable populations. For example, the taxation of certain food items has received global attention and has even been implemented in other countries, as 'junk food' taxes, the 'fat tax', and the taxation of sugar sweetened beverages, for example. As I looked around the food court, I wondered how such taxes might affect the people I saw. Would it mean fewer opportunities to meet with friends and share a meal? Would it mean fewer meals? Would it contribute to further social isolation, which as we already know, is problematic for our pensioners and older population? And for those who are already living tough, would taxation strip away the few pleasures or joys that are left within reach? How can these competing needs, values, and concerns be fairly balanced? This last question, although beyond the scope of my research to answer, is one that nonetheless needs to be asked and carefully considered, particularly when it comes to the development and implementation of public health policy.

I recognise that the prevalence of chronic disease and co-morbidities are legitimate concerns for public health, without doubt. But as I sat here, watching people from different walks of life, I asked myself: "As public health officials, who are we to condemn or vilify consuming fast food, or stigmatise those who do?" Yes, it is not the healthiest option. Yes, overconsumption may contribute to weight gain or poor health. But what if those things were not the most important things, or the most concerning things, to those individuals whom we hold responsible for their weight, health, and so many other factors of their lives. I thought about the homeless men and women I had seen enjoying their KFC™ feast. If the opportunity to enjoy that food together was one way they can experience pleasure—or simply to be able to afford a hot meal— I want them to have that option. They need to have that option.

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