

Can the sociology of social problems help us to understand and manage ‘lifestyle drift’?

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Gemma Carey^{1,*}, Eleanor Malbon¹, Melanie Pescud¹, Brad Crammond², and Philip Baker¹

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Q2 ¹Regulatory Institutions Network, Australian National University, Canberra, Australia, and ²Monash University, Melbourne, Australia

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*Corresponding author. E-mail: gemma.carey@anu.edu.au

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Summary

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Lifestyle drift is increasingly seen as a barrier to broad action on the social determinants of health. The term is currently used in the population health literature to describe how broad policy initiatives for tackling inequalities in health that start off with social determinants (upstream) approach ~~but~~ drift downstream to largely individual lifestyle factors, as well as the general trend of investing at the individual level. Lifestyle drift occurs despite the on-going efforts of public health advocates, such as anti-obesity campaigners, to draw attention to the social factors which shape health behavior and outcomes. In this article, we explore whether the sociology of social problems can help understand lifestyle drift in the context of obesity. Specifically, we apply Jamrozik and Nocella’s residualist conversion model to the problem of obesity in order to explore whether such an approach can provide greater insight into the processes that underpin lifestyle drift and inform our attempts to mitigate it.

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Key words: critical perspectives, health promotion discourse, social determinants of health

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INTRODUCTION

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‘Lifestyle drift’ has been identified as a barrier to successfully tackling the broad social determinants of health outcomes, particularly for outcomes such as obesity (Raphael, 2008; Popay *et al.*, 2010; Baum, 2011; Whitehead, 2012). The term has been used to refer to (i) policy initiatives for tackling ‘inequalities in health that start off with a broad social determinants (upstream) approach but drift downstream to largely individual lifestyle factors’ and (ii) the general trend of investing in individual behavioral interventions (Hunter *et al.*, 2010; Baum, 2011) [(Whitehead, 2012), p. 523]. A typical example of the former, where policy initiatives drift downstream to address lifestyle factors, is an initiative to reduce population-level obesity, which becomes a social marketing campaign encouraging individual physical

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activity (ANPHA, 2010; Lupton, 2014). This ‘drift’ from upstream approaches to lifestyle approaches is frequently associated with an accompanying move away from initiatives aimed at the whole population to action focused solely on the most disadvantaged groups, such as Indigenous groups and low-income earners (Whitehead, 2012).

Lifestyle drift occurs despite the on-going efforts of public health advocates to draw attention to the social factors which shape health behavior and outcomes (Baum and Fisher, 2014; Lupton, 2014). It continues in the face of evidence that lifestyle interventions are rarely successful at prompting significant and lasting behavioral change, in particular in the case of obesity (Popay *et al.*, 2010; Baum, 2011; Bryant *et al.*, 2011; LeBesco, 2011; Lantz and Marston, 2012; Katikireddi *et al.*, 2013; Baum and

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105 Fisher, 2014). This trend looks set to continue, with the emergence of nudge politics as the ‘next wave’ of behavioral interventions for public health problems (Bonell *et al.*, 2011; Mols *et al.*, 2014).

110 The causes of lifestyle drift are varied. Whitehead (2012) attributes lifestyle drift to a combination of mental blocks and denial or indifference to the problem, combined with powerful vested interests. Similarly, Baum (2011) argues that ‘damaging’ neoliberal discourses of individuality promote an intuitive logic that individuals can be, and should be, responsible for their own health; dominant neoliberal discourses have given rise to indirect techniques for governing health, shifting the onus of responsibility for health from the state to the individual (Kay and Williams, 2009). The fact that behavioral interventions are more politically palatable, more immediately relatable to the problem at hand and easier to devise than ‘upstream’ interventions may all be additional factors at play.

115 In this article, we explore whether the sociology of social problems can help understand (and in turn manage) lifestyle drift in obesity-related policy initiatives. Leading obesity experts acknowledge that the increase in obesity in developed countries since 1980 has been caused by changes to the food environment which have made excess caloric intake the default (Swinburn *et al.*, 2011). Efforts to address obesity which ignore this and treat obesity as an individual problem can potentially vilify and stigmatize individuals and social groups (LeBesco, 2011), including minority groups (Kumanyika, 2005). Drawing on a well-known model in the literature on the sociology of social problems by Jamrozik and Nocella (1998), we aim to further explore how, and under what circumstances, broad social problems like obesity become converted to individual issues that are targeted through behavioral-based interventions. We anticipate that by deepening our understanding of this process we are better able to identify strategies to manage lifestyle drift.

145 THE RESIDUALIST CONVERSION MODEL

150 According to the sociology of social problems, a social problem is any issue that some members of the community deem undesirable (Jamrozik and Nocella, 1998). In contrast to personal problems, which are specific to an individual (e.g. their own obesity), social problems invoke some general condition (e.g. increases in population obesity prevalence). Which issues gain prominence and how they are cast as social problems has long been a concern of both sociology and political science [see, for example, (Kingdon, 1984; Foucault, 1991)]. There are a range of sociological theories pertaining to the construction and management of social problems. These range from conflict

theory, critical theory (with roots in the work of Marx) and approaches arising from Becker’s and Foucault’s work on social problems as deviance (Becker, 1963; Foucault, 1975). Taken as a whole, this body of work seeks to understand and elucidate how ‘social conditions, processes and social arrangements or attitudes’ construct social issues as problematic, requiring individual or state intervention, while others do not [(Jamrozik and Nocella, 1998), p. 1].

The aforementioned work is largely concerned with describing the nature and construction of social problems. However, a gap has remained between explaining the construction of social problems (i.e. as deviance) and how to intervene or address these problems. This gap was noted as early as the 1950s by scholars such as Wright Mills (1959) and remains an issue today (LeBesco, 2011). In this article, we apply Jamrozik and Nocella’s (1998) model of residualist conversion of social problems, which attempts to address this gap, in order to generate insights into ways to manage phenomena such as lifestyle drift.

Jamrozik and Nocella (1998) drew upon the rich theoretical insights of the sociology of social problems in their creation of the ‘residualist conversion model’ (Figure 1). According to this framework, social problems emerge from the ‘disjuncture between societal goals and institutionalised means’ to manage them [(Jamrozik and Nocella, 1998), p. 6]. The model describes the process whereby a social problem (which requires a political response) becomes translated into a technical problem (often through the efforts of researchers), which is further converted into a private problem of individuals.

A key feature of the model is the emphasis on social problems as the ‘negative residue’ of existing political and economic processes. It explains the process by which social problems are constructed and reconstructed in ways that reflect dominant values and interests in society. Here, a social problem is considered to emerge as a ‘negative residue’ of society as it reproduces itself socially, culturally, economically and politically in the maintenance of dominant values and interests (Jamrozik and Nocella, 1998), for example capitalism. Jamrozik and Nocella (1998) argue that when social problems become a threat to dominant interests and values they become either relegated to a space that is beyond the control of the state (i.e. an issue that should be managed privately) or converted into a pathology associated with certain social groupings or individuals: ‘To maintain the legitimacy of those values and interests the power holders seek to remove social problems from the social sphere either by shifting them through explanation or deliberate action to places and forces beyond the control of the state or by relating such problems through residualist conversion to the

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sphere (where they are a problem for all of society and governmental responsibility) or become a technical or pathological issue associated with certain individuals or groups.

APPLYING THE RESIDUALIST CONVERSION MODEL TO OBESITY

A residualist conversion lens highlights that social problems, such as obesity, are intrinsically political; social problems are societal arrangements and attitudes deemed to be undesirable by dominant values and interests (which are represented politically). Most social problems do not occur equally across the whole population, leaving some groups open to being constructed as the ‘problem’ (Levitas, 1998; Marmot, 2010; LeBesco, 2011). That is, the causes of social problems might be explained by broad social arrangements (such as inequality or the distribution of social resources) yet their association with particular groups means that they can quickly become seen as problems characteristic of that group (Jamrozik and Nocella, 1998; Levitas, 1998; LeBesco, 2011). From this, interventions to address these problems convert broad social problems into personal or individual problems through a two-step process.

In the first step of the process, the problem initially begins within the social sphere—framed as a problem that governments have responsibility to address. For example, when obesity is framed as a population wide issue—driven by changes in people’s environments. This low-income or social problem is, however, converted into an individual level problem associated with particular ‘vulnerable’ groups. Jamrozik and Nocella argue that this is often facilitated by the well-meaning efforts of research and helping professions, seeking to understand and solve the problem. Lupton has mounted similar arguments regarding health promotion since the 1990s—suggesting that health promotion activities initiative by the state revolve around the regulation of problematic bodies (Lupton, 1995). In the case of obesity, the efforts of health promotion workers and social marketers to address higher levels of obesity in certain groups often shift attention to the characteristics of these groups (i.e. an inability to exercise or eat a healthy diet) (LeBesco, 2011; Crawshaw, 2012). This leads us to the second step in the process.

In the second step of the process (following on from conversion process), a problem’s political nature is translated into a technical problem (i.e. higher rates of obesity in low socioeconomic groups), and then further converted into an individual problem (i.e. these individuals or groups must be ‘helped’ to maintain healthier diets and lifestyles). Any inability of these efforts to remediate the problem are subsequently blamed on individuals: ‘Any successful

assistance rendered to recipients of professional services also serves to legitimate the given policy and its underlying values and interests by demonstrating the effectiveness of the intervention methods employed. If the intervention method fails, this is seen as evidence that the recipient has a difficult-to-correct . . . character ‘flaw’ or ‘unwillingness to respond’ (Jamrozik and Nocella, 1998, p. 107). Lupton has similarly argued that ‘government agencies engaged in health promotion, and the commercial companies they consult to assist them in their efforts, continue to rely on these simplistic, paternalistic, and reductionist approaches to educating the public and attempting to instigate behavior change’ [(Lupton, 2014), p. 45]. While interventions targeted at specific groups can achieve positive outcomes for that target group in some instances (Morgan et al., 2011), in doing so attention is focused upon the characteristics of that group, rather than at solving a broad societal problem (Levitas, 1998).

As suggested by the residualist conversion model presented in Figure 1, the processes which determine if a problem is converted into a negative residue are located in the power dynamics between the population experiencing the problem and the dominant social order (or values). If the group has power—for example if obesity affected high income groups at a rate disproportionate to low-income groups—the model indicates that the inherent power of this group would mean that obesity remained in the political sphere. That is, it would remain framed as a social problem that requires government responsibility. In this theoretical case, the responsibility would emphasize ‘upstream’ interventions which change the ultimate drivers of obesity, rather than lifestyle factors. However, if the group lacks power to maintain the issue in the political space, individualization of the problem through intervention methods occurs. As argued by Foucault, the body is the site at which power struggles are enacted and become real (Foucault, 1975; Lupton, 1995). The (well-meaning) documentation of the social gradient has played a role in this process—highlighting particular groups who can be targeted, despite the fact that obesity is a population wide issue.

Internationally, obesity and risk factors for obesity are generally regarded as following a social gradient (Wake et al., 2007; Sassi et al., 2009; Marmot, 2010; Frank and Akresh, 2013). While some contestation exists over the measurement of obesity and its implications for social gradient findings (Markwick et al., 2013), overall obesity appears to be more prevalent among lower socioeconomic groups. For example, health survey data from Australia, England and Canada have shown that there is a broadly inverse linear relationship between years spent in full-time education and probability of obesity (i.e. those with the

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most education have lower rates of obesity in most cases, although this finding does not always hold for men) (Devaux *et al.*, 2011). This evidence is strongest in the case of children (Costa-Font and Gil, 2013). In Australia, a social gradient is becoming increasingly clear in the data on obesity rates and dietary risk factors of young children (Wake *et al.*, 2007; Cameron *et al.*, 2012). This has resulted in the tendency to target vulnerable groups [see, for example, the work of (CO-OPS Collaboration, 2015) who document trends in obesity-related health promotion over time, and have shown that targeting vulnerable groups is increasing in the Australian context]. In her analysis of reports on the development of anti-obesity campaigns, Lupton notes that low socioeconomic groups ‘fell disproportionately into the “Defiant Resister” and “Quiet Fatalists”’ categories—requiring further targeting and management [(Lupton, 2014), p. 35].

CAN WE UNDERSTAND HOW TO MANAGE LIFESTYLE DRIFT USING THE RESIDUALIST CONVERSION MODEL?

The residualist conversion model has grown out of efforts in social policy to understand how particular social problems become constructed as the deviant behavior of particular groups (which threaten society as a whole). Other examples of social problems that become converted to ‘deviant behavior’ include unemployment and welfare (Levitas, 1998; Carey and McLoughlin, 2014). The result is that ‘whole of society’ issues are reduced to problems occurring at the fringes of society, which require increasingly complex interventions aimed at highly specific groups (Jamrozik, 1998; Carey and McLoughlin, 2014). Balancing universal and targeted approaches is a perennial issue in social policy, stretching back to the 1950s (Titmuss, 1968; McLaren and McIntyre, 2013; Carey and Crammond, 2014; Carey and McLoughlin, 2014). This literature has the potential to offer insights into how to reverse the trend towards lifestyle drift.

The residualist conversion model emphasizes that if problems are kept in the social sphere they will be seen as legitimate areas of government action. In other words, if obesity is framed as a whole of society issue rather than something affecting primarily ‘vulnerable groups’ (Frohlich and Potvin, 2008; McLaren *et al.*, 2010) ‘upstream’ action should be more easily secured. Studies on public health collective action efforts in tobacco and alcohol demonstrate that such framing is important for generating political priority for upstream interventions (Kersh and Morone, 2002; Dorfman *et al.*, 2004). This would require framing differences in the prevalence of obesity as systemically rather than individually produced, as resulting from the toxic or

obesogenic food and built environments in which people grow, live and work (Swinburn *et al.*, 2008). Individual self-regulation is then made possible through the creation of a supportive environment in which healthy choices are the default (Brownell, 2010).

As Jamrozik and Nocella argue, ‘To maintain and reassert the legitimacy of the structure of power and its values and interests, intervention methods must shift the focus of attention to the population negatively affected by a given social condition’ [(Jamrozik and Nocella, 1998), p. 104]. Dissenting voices in the obesity literature offer empirical insights that can help to re-establish obesity as a whole of population problem (i.e. one that should remain in the social and political realm, rather than a ‘social residue’ of particular low socioeconomic groups). For example, men classified as overweight (rather than obese) who do not follow the social gradient (i.e. wealthy men are more likely to be overweight, although not obese, than men from low socioeconomic backgrounds) (Markwick *et al.*, 2013). Similarly, the link between obesity and education is not prevalent for men in some countries, where men with more education are just as (or more likely) to become obese (Sassi *et al.*, 2009). The greater social power of these individuals compared with low socioeconomic groups can help to maintain obesity as a whole of society issue and moderate residualized conversion. However, ‘if the political nature of a social problem is accepted by government’ either because of the nature of the matter or through public pressures ~~then~~ the ‘government cannot ignore, the problem will remain in the political sphere and attempts are likely to be made to solve it at that level’ [(Jamrozik and Nocella, 1998), p. 104]. For obesity prevention to avoid the observed ‘lifestyle drift’, the nature of the issue must be framed in a way that the political nature of obesity cannot be ignored by the state. In other words, the problem must be framed in a way that enables the state to accept the problem as a broad social issue, rather than an issue only faced by specific groups. Research is currently underway in this area; in America Nierderdeppe *et al.* (2014) have shown narratives that do not feature acknowledgment of personal responsibility, but rather emphasize environmental causes and solutions, are more successful at increasing societal cause attributions about obesity even among conservative political groups. It would be fruitful to see this research replicated in other political contexts.

Others have argued that a broad human rights approach could keep obesity in the social realm: ‘. . . using the language of a rights-based approach for protecting children may help to avert the alternative risk-based approach where the health outcomes for children are somehow supposed to be balanced against the

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profitability of the industries developing and marketing unhealthy foods' [(Priest, 2010), p. 44].

Arguably, a more nuanced understanding of policy targeting may help to manage negative effects of residualized conversion and lifestyle drift. Recent research has shown that universal (i.e. whole society) approaches and targeting are not simple opposites (Carey and Crammond, 2014). Rather, they sit along a continuum of differing forms of targeting underpinned by differing conceptualizations of the relationships between governments and citizens (Carey and Crammond, 2014). A more nuanced understanding of different forms of targeting can help us to conceptualize how upstream and downstream approaches can be combined into a complementary framework (Carey et al., 2015). As Carey et al. argue 'Differing forms of universalism and targeting can be combined in such a way as to maximise the strengths of each, while forming a cohesive whole' [(Carey et al., 2015), p. 4]. Here, the aim is to strike a balance between universal approaches that promote equality and fairness (e.g. maintain a problem in the social sphere), with the need to cater to specific groups which have differing levels of risk and need. The framework provided by Carey et al. demonstrates how universal and targeted interventions can be balanced—keeping universal ('upstream') action in place (Carey et al., 2015), while still catering for the differing needs of particular social groups if and where appropriate (Carey and Crammond, 2014). Here, societal level action is maintained by federal governments, where smaller programs which target pockets of need at the community level are handled locally—ensuring they are context specific and do not disrupt the societal/universal approach [see (Carey et al., 2015) for full framework and discussion].

CONCLUSION

In this article, we have applied a model drawn from the literature on the sociology of social problems to the issue of lifestyle drift within the context of obesity prevention. The aim was to assess whether insights from this literature, and the particular model chosen, helped to further unpack the lifestyle drift phenomena in the case of obesity policy and, in turn, highlight new ways to prevent it. We found that the residualist conversion model provides a new way of understanding the different factors that might encourage lifestyle drift in obesity and manage these to reach a complementary set of universal and targeted interventions. Emerging research in the USA indicates that constructing the right kinds of narrative around particular health issues is critical for ensuring this occurs (Niederdeppe et al., 2014). We suggest that dissenting voices in the obesity literature, which argue against the existence of a clear social

gradient in obesity, could actually help political action and commitment to a whole of society obesity prevention effort.

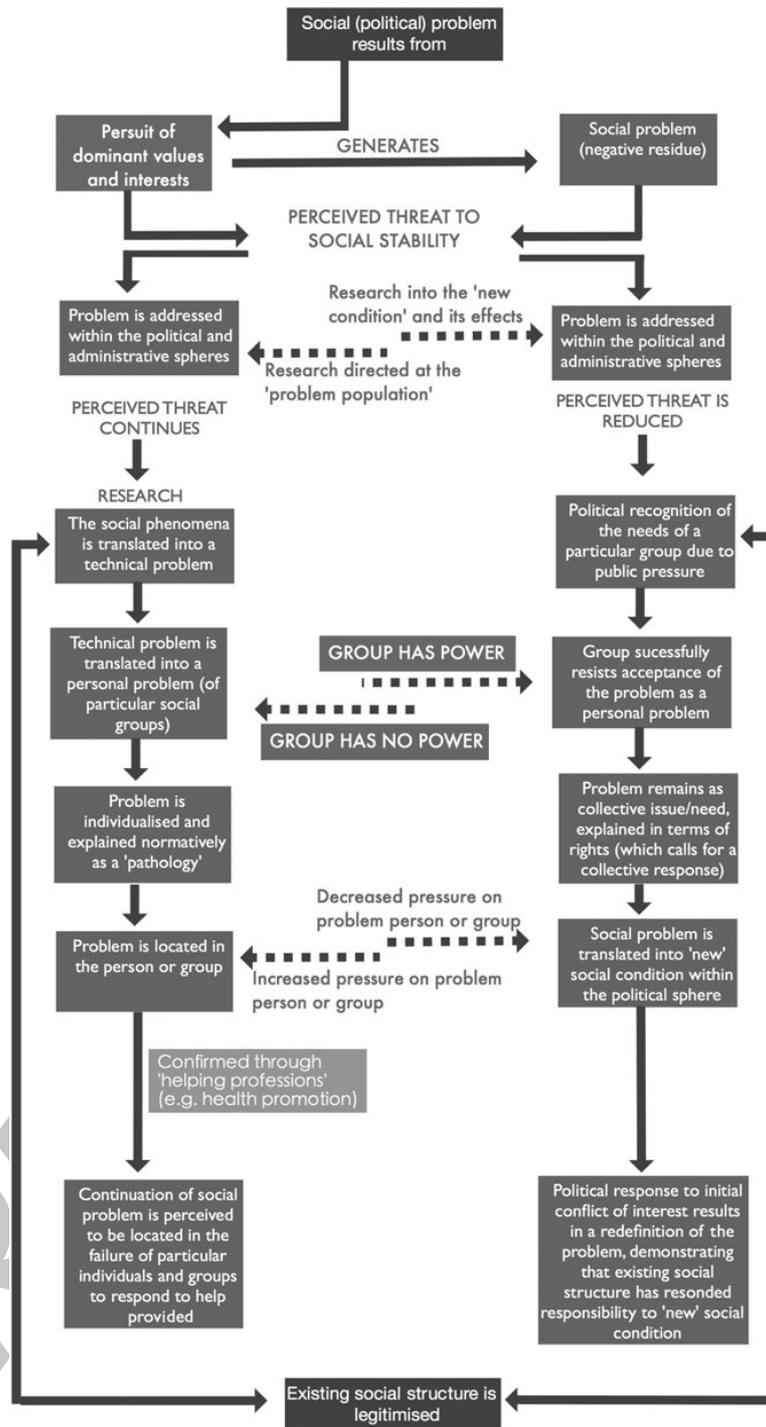
REFERENCES

- ANPHA (2010) *Taking Preventative Action A Response to Australia: The Healthiest Country by 2020*. National Preventative Health Taskforce, Canberra. 580
- Baum F. (2011) From Norm to Eric: avoiding lifestyle drift in Australian health policy. *Australian and New Zealand Journal of Public Health*, 35, 404–406.
- Baum F., Fisher M. (2014) Why behavioural health promotion endures despite its failure to reduce health inequities. *Sociology of Health & Illness*, 36, 213–225. 585
- Becker H. (1963) *Outsiders: Studies in the Sociology of Deviance*. Free Press, New York.
- Bonell C., McKee M., Fletcher A., Haines A., Wilkinson P. (2011) Nudge smudge: UK Government misrepresents 'nudge'. *The Lancet*, 377, 2158–2159. 590
- Brownell D. (2010) Personal responsibility and obesity: a constructive approach to a controversial issue. *Health Affairs*, 29, 279–387. 595
- Bryant T., Raphael D., Schrecker T., Labonte R. (2011) Canada: a land of missed opportunity for addressing the social determinants of health. *Health Policy*, 101, 44–58.
- Cameron A. J., Ball K., Pearson N., Lioret S., Crawford D. A., Campbell K., et al. (2012) Socioeconomic variation in diet and activity-related behaviours of Australian children and adolescents aged 2–16 years: Childhood diet, activity and SEP. *Pediatric Obesity*, 7, 329–342. 600
- Carey G., Crammond B. (2014) A glossary of policy frameworks: the many forms of 'universalism' and policy 'targeting'. *Journal of Epidemiology & Community Health*. Q5
- Carey G., McLoughlin P. (2014) The powerful pull of policy targeting: examining residualisation in Australia. *Critical Public Health*. 605
- Carey G., Crammond B., De Leeuw E. (2015) Towards health equity: a framework for the application of proportionate universalism. *International Journal for Equity in Health*, 14. Q6 610
- CO-OPS Collaboration (2015) *Characteristics of Community-Based Obesity Prevention Initiatives in Australia 2013*. CO-OPS Collaboration. Q7
- Costa-Font J., Gil J. (2013) Intergenerational and socioeconomic gradients of child obesity. *Social Science & Medicine*, 93, 29–37. 615
- Crawshaw P. (2012) Governing at a distance: social marketing and the (bio) politics of responsibility. *Social Science & Medicine*, 75, 200–207.
- Devaux M., Fransco S., Church J., Cecchini M., Borgonovi F. (2011) Exploring the relationship between education and obesity. *OECD Journal: Economic Studies*, 121–159. Q8 620
- Foucault M. (1975) *Discipline and Punish*. Random House, New York.
- Foucault M. (1991) The ethic of care for the self as a practice of freedom: an interview with Michel Foucault on January 20, Q9

1984. In *The Final Foucault*. The MIT Press, Cambridge, MA.
- 625 Frank R., Akresh I. R. (2013) Social patterning in body mass index (BMI) among contemporary immigrant groups: the emergence of a gradient. *Demography*, 50, 993–1012.
- 630 Frohlich K. L., Potvin L. (2008) Frohlich and Potvin respond. *American Journal of Public Health*, 98, 1352.
- Hunter D. J., Popay J., Tannahill C., Whitehead M. (2010) Getting to grips with health inequalities at last? *British Medical Journal*, 340, c684.
- 635 Jamrozik A. (1998) *The Sociology of Social Problems: Theoretical Perspectives and Methods of Intervention*. Cambridge University Press, New York.
- Jamrozik A., Nocella L. (1998) *The Sociology of Social Problems: Theoretical Perspectives and Methods of Intervention*. Cambridge University Press, New York.
- 640 Katikireddi S. V., Higgins M., Smith K. E., Williams G. (2013) Health inequalities: the need to move beyond bad behaviours. *Journal of Epidemiology and Community Health*.
- Kingdon J. (1984) *Agendas, Alternatives, and Public Policies*. Little, Brown, Boston.
- 645 Kumanyika S. (2005) Obesity, health disparities, and prevention paradigms: hard questions and hard choices. *Preventing Chronic Disease*, 2.
- Lantz S., Marston G. (2012) Policy, citizenship and governance: the case of disability and employment policy in Australia. *Disability & Society*, 27, 853–867.
- 650 LeBesco K. (2011) Neoliberalism, public health, and the moral perils of fatness. *Critical Public Health*, 21, 153–164.
- Levitas R. (1998) *The Inclusive Society? Social Exclusion and New Labour*. MacMillan Press, London.
- Lupton D. (1995) *The Imperative of Health: Public Health and the Regulated Body*. Sage, London.
- 655 Lupton D. (2014) ‘How do you measure up?’ Assumptions about ‘obesity’ and health-related behaviors and beliefs in two Australian ‘obesity’ prevention campaigns. *Fat Studies*, 3, 32–44.
- 660 Markwick A., Vaughan L., Ansari Z. (2013) Opposing socio-economic gradients in overweight and obese adults. *Australian and New Zealand Journal of Public Health*, 37, 32–38.
- Q10 Marmot M. (2010) Fair Society, Healthy Lives: The Marmot Review. Strategic Review of Health Inequalities in England post-2010. London.
- 665 McLaren L., McIntyre L. (2013) Conceptualizing child care as a population health intervention: can a strong case be made for a universal approach in Canada, a liberal welfare regime? *Critical Public Health*, 24, 418–428.
- 680 McLaren L., McIntyre L., Kirkpatrick S. (2010) Rose’s population strategy of prevention need not increase social inequalities in health. *International Journal of Epidemiology*, 39, 372–377.
- Mols F., Haslam S. A., Jetten J., Steffens N. (2014) Why a nudge is not enough: a social identity critique of governance by stealth: why a nudge is not enough. *European Journal of Political Research*. 685
- Morgan P. J., Collins C. E., Plotnikoff R. C., Cook A. T., Berthon B., Mitchell S., Callister R. (2011) Efficacy of a workplace-based weight loss program for overweight male shift workers: the Workplace POWER (Preventing Obesity Without Eating like a Rabbit) randomized controlled trial. *Preventive Medicine*, 52, 317–325. 690
- Niederdeppe J., Shapiro M. A., Kim H. K., Bartolo D., Porticella N. (2014) Narrative persuasion, causality, complex integration, and support for obesity policy. *Health Communication*, 29, 431–444.
- 695 Popay J., Whitehead M., Hunter D. J. (2010) Injustice is killing people on a large scale—but what is to be done about it? *Journal of Public Health*, 32, 148–149.
- Priest N. (2010) A human rights approach to childhood obesity. In Swinburn B., Waters E. (eds), *Preventing Childhood Obesity*. Blackwell, UK, pp. 40–50. 700
- Raphael D. (2008) Grasping at straws: a recent history of health promotion in Canada. *Critical Public Health*, 18, 483–495.
- 705 Sassi F., Devaux M., Cecchini M., Rusticelli E. (2009) The obesity epidemic: analysis of past and projected future trends in selected OECD countries. Q11
- 710 Swinburn B., Sacks G., Lobstein T., Rigby N., Baur L. A., Brownell K. D., et al. (2008) Sydney Principles’ for reducing the commercial promotion of foods and beverages to children. *Public Health Nutrition*, 11.
- 715 Titmuss R. M. (1968) *Commitment to Welfare*. Allen and Unwin, London.
- Wake M., Hardy P., Canterford L., Sawyer M., Carlin J. B. (2007) Overweight, obesity and girth of Australian preschoolers: prevalence and socio-economic correlates. *International Journal of Obesity*, 31, 1044–1051.
- Whitehead M. (2012) Waving or drowning? A view of health equity from Europe. *Australian and New Zealand Journal of Public Health*, 36, 523.
- Wright Mills C. (1959) *The sociological imagination*. Penguin, Harmondsworth, UK.
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Figure 1.

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