*Community Dental Health* (2016) **33,** 156–160
Received 7 March 2016; Accepted 1 April 2016

doi:10.1922/CDH_3716Gibson05

# Inequalities in oral health: the role of sociology

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***Abstract:*** This paper seeks to identify an important point of contact between the literature on inequalities in oral health and the sociology of power. The paper begins by exploring the problem of social inequalities in oral health from the point of view of human freedom. It then goes on to briefly consider why inequalities in oral health matter before providing a brief overview of current approaches to reducing inequalities in oral health. After this the paper briefly introduces the problem of power in sociology before going on to outline why the problem of power matters in the problem of inequalities in oral health. Here the paper discusses how two key principles associated with the social bond have become central to how we think about health related inequalities. These principles are the principle of treating everyone the same (the principle of autonomy) and the related principle of allowing everyone to pursue their own goals (the principle of intimacy). These principles are outlined and subsequently discussed in detail with application to debates about interventions to reduce oral health related inequalities including that of water fluoridation. The paper highlights how the 'Childsmile' programme in Scotland appears to successfully negotiate the tensions inherent in attempting to do something about inequalities in oral health. It then concludes by highlighting some of the tensions that remain in attempting to alleviate oral health related inequalities.

**Key words:** *inequality, oral health, sociology, freedom, Scotland*

## Introduction: Human freedom and the problem of oral disease

Oral diseases are problematic because they impact on the quality and extent of human life (Locker, 1988; 1995; Locker and Allen, 2007; Slade, 1997; 1998; Slade *et al*., 2005). Put another way, they interfere with the ability of individuals to realise their ambitions; to live a life that is free from pain and disease. Furthermore, those who experience oral disease and any associated pain also experience serious implications with regard to their life chances. Evidence from the US shows that children who suffer from tooth pain have trouble concentrating in school and are less likely to be academic achievers (Kozol, 2014). Several important reviews on the extent of inequalities in oral health have demonstrated that the extent of inequalities in oral health can be quite stark (Newton and Bower, 2005; Sheiham *et al*., 2011; Watt, 2005; 2007; 2012; Watt and Sheiham, 1999, 2012). Take the example of Aboriginal children in Australia; there is evidence that they have up to twice the rate of dental caries compared to their non-Aboriginal counterparts (Jamieson *et al*., 2007). The differences become more dramatic when aged-matched pairs were taken from the third wave of the Aboriginal Birth Cohort study and the 2004–2006 National Survey of Adult Oral Health Young Australian Aboriginal adults were eight times more likely to experience dental decay than their age-matched Australian counterparts (Jamieson *et al*., 2010). It is well established that significant proportions of poor children suffer from a greater proportion of disease than those from more affluent backgrounds (Locker, 2000; Sheiham *et al*., 2011; Watt and Sheiham, 1999).

Several authors have indicated that inequalities in oral health are important because they insult our sense of fairness (Shaw *et al*., 2009; Watt, 2007, 2012). Our reasons for objecting to inequalities in oral health are also significant because they relate to a number of important social principals, these principals are rarely discussed in the literature but they nonetheless reveal hidden dimensions in debates related to inequalities in oral health. The first principle is to do with our desire to promote human agency. Promoting human agency has become a central goal of social institutions in OECD countries for several centuries. The valorisation of human agency involves allowing everyone to *equally* exercise their right to self-control. The second principal involves the freedom to live differently; to live one's life in a way that provides a sense of personal identity (Sulkunen and Warsell, 2012). The Finnish sociologist Pekka Sulkunen referred to this as the principal of intimacy. The principal of intimacy followed when people took the right of autonomy for granted he stated:

> *"When people take their autonomy for granted they start to claim the right to intimacy, too. Intimacy means separation from others, a sensitivity to authentic selfhood, distinction, and identity, in other words difference." (Sulkunen, 2014: p190)*

He argued that both of these principles could clash. On the one hand we want to promote *universal* agency through the protection of autonomy for everyone, on the other hand, we wish to preserve the right of individuals to choose their own destiny (Sulkunen, 2010; 2014; Sulkunen and Warsell, 2012). This paradox has important implications for how we see inequalities in oral health and how we might legitimately intervene to reduce such disparities.

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## *Inequalities in oral health: the calls to action*

When it comes to oral health-related policy, the tendency has been to follow the approach suggested by the New Public Health movement, which involves adopting the Ottawa Charter for Health Promotion (World Health Organization, 1986) and the total population approach. The total population approach principally involves focussing on upstream action to promote oral health (Sheiham *et al*., 2011; Watt, 2007). Watt (2007), for example, argues for a concerted move away from approaches directed at individual behaviour change towards those focused on the social determinants of health, for example the inclusion of fluoride in drinking water to mitigate against tooth decay.

A more recent example of this approach are calls for a fundamental change in our food environment in order to reduce the negative impacts of sugar consumption (Moynihan and Kelly, 2013; Moynihan and Petersen, 2004; PHE, 2015), that have resulted in legislation limiting sugar content in drinks in the UK. We can be confident that the evidence supports these calls and that the approach will be more effective than focusing on individual behaviour change (see for example Evans' (2011) discussion concerning consumer practices and food waste reduction). There is compelling evidence that food directly marketed to children has a strong impact on their 'preferences' and 'choices'. As a consequence there are calls to reduce the volume of marketing targeted at these groups. This, includes discouraging pricing designed to incentivise the purchase of larger portion sizes (PHE, 2015). Public Health England concluded that "*the general tone of the available evidence is that the effect of restrictions on marketing and promotions may be greater than those from fiscal measures because marketing and promotions tend to be more universal (affecting many products) and have a potentially greater impact on each product than the generally limited range of products to which taxes have been applied to date*" (PHE, 2015: p41). Actions on sugar are, of course, just one element of any oral health policy. Watt (2007) describes the basic tenets of a total population approach, one that focuses on upstream actions to improve oral health including the development of public policies, regulation and fiscal measures such as taxation. Watt (2007) also recognises the importance of social institutions such as nurseries, schools, hospitals and workplaces in generating social change. But is this the whole picture and what, if anything, would sociology add to these debates?

It could be argued that the *raison d'être* of sociology has been to promote the idea of fairness and justice in the realisation of human agency (Sulkunen, 2010). In doing so, sociology has always been at the centre of debates about the exclusion of particular groups of people from society for whatever reason. A key purpose of the discipline has been to reveal where the universal goal of human agency has not been realised. Another goal of the discipline has been to reveal hidden points of observation, to expose how practices of everyday life and the norms that help shape those practices, but which often go unnoticed, have real impacts on how different people are able to live their lives (Sulkunen, 2014). In this respect, the goals of sociology are the same as those of oral epidemiology and dental public health in general. In what follows, we seek to contribute to the debate about oral health related inequalities through an analysis of the relevance of the concepts of power and human agency.

## *Power and human agency*

The concept of power has received widespread attention in social science and is frequently a source of debate. Pluralists such as Robert Dahl have argued that the scientific study of power should be empirical i.e. it should involve the study of occasions where power has actually been used in decision-making. Pluralists typically focus on how decisions are taken by governments and that such overt decisions are influenced by external groups who attempt to exert influence. They have been challenged, however, since power does not typically operate in this way. In contrast, power elite theorists have argued that what makes power especially pernicious is that it can be used to shape agendas without anyone being aware that such influence is happening. So, for example, a dentist might interact with their patient and omit to tell them that an alternative treatment might be equally effective. They might present information to influence the patient to decide to go for more expensive treatments over cheaper, equally effective alternatives. In such an example, the dentist would be using power.

Stephen Lukes (1986) sought to overcome the differences between pluralists and power elite theorists in a now famous essay by proposing a third dimension of power. This, he argued, was power that somehow secured the compliance of groups of people even when it was against their best interests to submit to their own domination (Lukes, 1986). This dimension of power is crucial. It is frequently not visible as power, it happens without any obvious action by institutions and its goal is to produce consent. So, for example, we go to the shop and we see a 'buy one, get one free' offer on chocolate biscuits. The offer is appealing because it will save us money. We purchase the two packets of chocolate biscuits thinking that we have got a bargain. In doing so, we exercise our freedom to buy what we like, unaware that the offer encourages us to consume more chocolate biscuits, and that offers such as these are responsible for increasing the consumption of particular products (Egger and Swinburn, 1997; PHE, 2015; Townshend and Lake, 2009). In exercising our freedom, we have become the willing subjects of a power relationship, even when this relationship might not be good for our health. Power that reveals itself is frequently power that fails. Power, however, more often than not, works "*through capillary forms of existence*"; it operates in how we speak, through our attitudes, 'learning processes' and permeates our 'everyday lives'. Likewise, the power of those we would challenge "*extends across issues and contexts, bearing unintended as well as intended consequences, even without active intervention*" (Sulkunen, 2010; p. 498). The third dimension of power effectively involves when it is hidden in the acts that produce domination. In adopting this approach, Lukes was referring to the work of Foucault (1982). For those of us interested in reducing sugar consumption, the third dimension of power presents itself as being particularly problematic. We understand why Public Health England (2015) seeks to challenge the power of producers and retailers to shape desires and wants through particular forms of marketing.

From a sociological perspective on power, this makes eminent sense. But it is not the whole picture. Power relationships can also take an additional form.

Sulkunen (2009; 2010; 2014) has argued that there is a fourth dimension of power related to the social contract. Contractual governance stresses transparency, accountability and mutual delivery of what has been agreed to on both sides. "*Above all, it underscores the maximum awareness and voluntary commitment of partners to the terms of the transactions*" (Sulkunen, 2010: p. 498). Sulkunen (2009; 2010) called this 'epistolary power'. Understanding epistolary power is critical to understanding how social interventions operate in a society that is saturated by the principals of autonomy and intimacy discussed above.

### *What does this have to do with oral health inequalities?*

In order to answer this question we have to consider the nature of the basic social bond in society. Sulkunen (2009) argues that this bond has taken on the appearance of the social contract. Put simply, this means that we submit ourselves to relationships with each other and other social institutions on the basis of a freely negotiated contract. Such contracts are not built on the basis of legal rules, they are voluntary arrangements that we submit ourselves to and we do so without really questioning why (Sulkunen, 2009; 2010). For example, patients will often submit themselves to dental treatment on a voluntary basis despite not having any real evidence that they will avoid experiencing significant discomfort. Sulkunen (2009) argues that this is because, for the OECD countries at least, there has been a long term struggle to establish "*the modern ideals of the nation, of progress as the common good, and individual autonomy as the order of dignity and worth*" (Sulkunen, 2010: p. 502)**.** These values have become so qualitatively widespread that they permeate how we think in relation to most things, inequalities included. We would argue that these ideas can reveal important dimensions to debates in dental public health concerning oral health related inequalities (Sulkunen, 2009).

The social bond is important because it protects the underlying values of agency and intimacy. We would argue, together with Sulkunen (2009), that these values also permeate debates about the problem of health related inequalities. Sulkunen (2009; 2010) argues, for example, that it is much easier to accept living under poor conditions and suffering from poor health if one continues to believe that there has at least been some element of free choice along the way (Sulkunen, 2010). It is equally important to be able to claim, for example, that excellent oral health has happened as a result of the hard work one has put into maintaining and perhaps even enhancing it. Evidence corroborates this claim to some extent, when individuals have been asked about their oral health they frequently claim that either good or bad oral health is a matter of personal choice (Gregory *et al*., 2005). This is the case even in instances where it is quite clear that the social determinants of health are operating to disadvantage certain groups. Sulkunen (2009; 2010) asserts that whilst inequalities in health might insult our sense of fairness, they are nonetheless tolerated because they are secondary to more fundamental values that must be protected. This, of course, generates a profound sense of ambivalence but is nevertheless a highly relevant, often hidden point in the debate about health related inequalities; one that needs to be considered in more depth.

The profound ambivalence we feel about inequalities are possibly never more acute than when we confront the fact that these values are central to why we tolerate the power of certain organisations to shape our food environment (Egger and Swinburn, 1997; PHE, 2015; Richardson, 2009; Townshend and Lake, 2009). Good example are studies of the 'food scape', the sites at which food is displayed for purchase and where it is consumed. These studies reveal how there is an increasing concentration and presentation of foods in non-traditional sites such as train stations, airports and hospitals (Winson, 2003). A particular feature of this work is that the presentation of 'pseudo foods', foods which are typically high in sugar and which have very low nutritional value, has increased in different settings. This has led to claims that there is an ongoing 'colonisation' of the 'food scape'. These changes may have acted as significant 'upstream' factors (Acheson, 1998; Watt, 2007) in changing food practices (Egger and Swinburn, 1997; Swinburn *et al*., 1999). In the United Kingdom, the preferred response to these developments remains voluntary partnership agreements between parties to gradually reduce harmful levels of salt and sugar in foods (Westminster Food and Nutrition Forum., 2015). The same values that apply to individuals apply to organisations. The argument is that they should be allowed to freely determine their own futures, until that is, they start to impact on the health of others. It is at the point where the right to determine one's future impacts on others that the problems with the underlying social contract emerge.

So whilst we agree with Watt (2012) and others, that more upstream action would produce significant benefits, there are important values shaping why some of the more upstream options remain difficult to achieve. There can be little doubt that water fluoridation remains the upstream intervention of choice to reduce dental caries-related inequalities. However, whilst it promotes universal autonomy by exposing everyone to fluoride in the same way, it simultaneously undermines everyone's ability to determine their own future. It removes individual choice, because once the fluoride level of the water supply is artificially adjusted it is very difficult to avoid being exposed to such fluoridation. It is for this reason that political agreement on water fluoridation remains challenging. The most recent attempt to fluoridate public water supplies in the UK has been blocked and Ireland's water fluoridation programme is being steadily undermined (IDA, 2014; PHE, 2014; Pope, 2014).

Another example of the difficulties of implementing the more upstream options is the current debate about the 'sugar tax'. At the time of writing, the UK government has just indicated that it will implement a levy on sugar sweetened beverages. This policy option has been vigorously opposed on many levels by those with vested financial interests in maintaining the status quo. So whilst at this point in time the levy is to go ahead, there remains a significant lobby opposed to the levy and as such it is not a policy option in many other countries. The same underlying values that shape the emergence of the social contract play a central role in either supporting or undermining policy options to reduce inequalities in oral health.

An example of a programme that negotiates the conflicts associated with these values is the 'Childsmile' programme in Scotland. There are three strands to Childsmile. Strand one has a universal focus and seeks to distribute free tooth brushes and tooth paste to every child on at least six occasions in the child's first five years of life. It also seeks to deliver tooth brushes and tooth paste to first and second year children at primary schools in disadvantaged areas. The second and third elements of Childsmile involve interventions targeted at the most deprived groups in Scotland, or those at risk of developing oral disease (Macpherson *et al*., 2013; Shaw *et al*., 2009). The second element is called 'Childsmile practice' and involves referrals of at-risk children to dental care support workers who are there to 'facilitate' mothers to attend specific dental practices who will then provide additional dietary advice and support. In Childsmile three, nurseries and schools in the most deprived areas are involved in other activities including twice yearly fluoride varnish applied to the children's teeth by Childsmile teams including dental nurses and dental health support workers. In addition to these activities, oral health care 'advice' is given to children and their parents/carers. The premise behind the Childsmile initiative more broadly is to help build a supportive and sustained environment in socially deprived areas. Given that there has traditionally been significant opposition to water fluoridation in Scotland, the Childsmile interventions offer a targeted, yet still upstream intervention for those parts of the population most susceptible to oral health inequalities.

The programme satisfies the principles we have discussed in this paper. It is universal because Childsmile one is offered to every Scottish child and as such preserves the principal of treating everyone the same. At the same time it is 'offered free' and therefore preserves the principal of intimacy. Every parent can 'choose' to either participate or reject participation in the programme. Childsmile two and three also satisfy the principles of respecting autonomy and intimacy. As indicated, additional advice and dental visits are 'offered' to parents and fluoride varnish is applied to children's teeth if their parents give 'consent' for this to happen. Additionally oral health 'advice' is given in schools and nurseries in deprived areas. The programme is an excellent example of how 'episcopal' power can be used in the absence of the ability to achieve upstream action. In doing so, Shaw *et al*. (2009) argue that the programme successfully negotiates the tensions between promoting oral health as a whole and at the same time reducing inequalities. They put it beautifully when they stated that:

> *"from the perspective of improving health and reducing inequalities, fluoridation is an interesting example of a universal intervention. Systematic reviews of the evidence .....note the limited quality of evidence in the field but nonetheless suggest that there is some evidence that dental health inequalities are reduced. Although Childsmile might be regarded as a more positive intervention, in that it helps people to help themselves, people must choose to participate in the programme; fluoridation, on the other hand, avoids this potential access problem" (Shaw et al., 2009, p136)*

We would argue that the principal of choice is also more desirable in a society that has become 'saturated' by the principals of autonomy and intimacy. If Sulkunen (2009; 2010) is right, we would argue, when upstream interventions are unattainable, we should pay particular attention to these principals as they may point the way towards a compromise position; one that can open the door for action where it has not been possible in relation to reducing inequalities in oral health.

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