Tough Luck and Tough Choices: Applying Luck Egalitarianism to Oral Health

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ABSTRACT

Luck egalitarianism is often taken to task for its alleged harsh implications. For example, it may seem to imply a policy of non-assistance towards uninsured reckless drivers who suffer injuries. Luck egalitarians respond to such objections partly by pointing to a number of factors pertaining to the cases being debated, which suggests that their stance is less inattentive to the plight of the victims than it might seem at first. However, the strategy leaves some cases in which the attribution of individual responsibility is appropriate (and so is, it seems, asking people to pick up the tab for their choices). One such case is oral health or significant aspects of this. It is appropriate, the paper argues, to hold people responsible for a number of factors that affect their oral health. A luck egalitarian approach inspired by John Roemer can assess whether people have acted responsibly by comparing their choices to those of their peers. A luck egalitarian approach to oral health

would recommend prioritizing scarce resources in a responsibility-weighted queuing system and include co-payment and general taxation among its measures off financing.
***Key Words**: luck egalitarianism; oral health; dental care; personal responsibility; lifestyle diseases.*

I INTRODUCTION

Luck egalitarianism asserts that distributions are just if, and only if, how well people fare relative to others, reflect their exercises of responsibility (Lippert-Rasmussen, 1999: Knight 2009, 230). Thus, luck egalitarianism embraces personal responsibility and rejects holding people responsible for natural or social circumstances (Cohen 2006; Voigt 2013). Often Luck egalitarianism is interpreted as encompassing a principle of compensation and a principle of reward. The former states that people who are worse off relative to others in a way not reflecting their exercise of responsibility should be compensated and the latter that differences between people reflecting such exercises of responsibility should be left untouched (Fleurbaey, 2008; Roemer, 2012).[1] Applying luck egalitarianism to health is controversial, but there is a growing literature on the topic (Albertsen and Knight 2014; Cappelen and Norheim 2005; Cappelen and Norheim 2006; Le Grand 2013; Segall 2007; Segall 2010; Segall 2011; Segall 2012).

It has famously been argued that luck egalitarianism must refuse to compensate those who make imprudent choices (Anderson 1999: Fleurbaey 1995, 40). Such critics ask whether it is just for society to refuse to treat the reckless motorcyclist who drives without helmet and is severely injured in a crash. Since many luck egalitarians wish to resist this conclusion health may be considered a hard case for luck egalitarianism, and for those and other reasons many remain unconvinced over its viability in a health care context (Andersen et. al 2013; Brown, 2013; Nielsen, 2013: Nielsen and Axelsen 2012: Venkampoorum, 2011; Wikler, 2004). In response to the charge of being too harsh, luck egalitarians have developed a number of reasons why we should not, after all, hold people responsible for their health-affecting choices. In principle such reasons can be divided in two categories. The first claims that

compensation in such cases does in fact follow from the principle of compensation. This claim is often based on the an argument to the effect that people's choices are so heavily influenced by circumstances that they should not be considered exercises of responsibility and thus eligible for compensation. The second category consists of different arguments for, why we should for some choices dispense with the principles of reward and compensation, even when we acknowledge that people are in fact responsible for being worse off. One such reason is that people should not be held responsible for their choices, because the choices reflect their conception of the good life. Doing so, some authors claim would be unreasonable. Others allow for compensation, when choices leave people with their basic needs unfulfilled. Redistribution is also recommended by some, who argue that the gambles people undertake by their health-related choices are to be considered quasi gambles; gambles where people would prefer the expected value to the risk of gambling.[2] This last type of reason argues that redistribution among quasi-gamblers is just.

This article discusses whether these reasons are relevant in the context of oral health. It undertakes this discussion for the oral health of adults in the context of two widespread and well-known sources of bad oral health: periodontal disease and carries. It concludes that these reasons are less present in this context. Oral Health should be considered a subject of importance since bad oral health can significantly worsen a person's well-being by inflicting pain and reducing his/her ability to sleep and chew (Chavers, Gilbert, and Shelton 2003; Dharamsi and MacEntee 2002; Vargas and Arevalo 2009; U.S. Department of Health and Human Services. 2000).[3] It is therefore interesting, that it seems not, on reflection, counter-intuitive to hold people responsible for their oral health in this area of health. However, bad oral health unequally affects people's lives (Geyer, Schneller, and Micheelis 2010; Thomson et

al., 2004; U.S. Department of Health and Human Services. 2000). In order to evaluate such inequalities a luck egalitarian approach inspired by John Roemer is introduced to assess whether people are responsible for their choices by comparing their choices to those of their peers. Afterwards it is evaluated whether such choices are of a kind that allows for compensation, and it is argued, that choice of food consumption and maintaining oral hygiene is neither unreasonable to expect of people, nor in general resulting in people's basic needs being unmet. The strongest candidate for (some) redistribution is the argument that the choice affecting oral health could be classified as quasi-gambles.

Even though one might deem a person to be responsible for his/her actions that affects health and want to hold that person responsible for the relevant choices, what the consequences should be is a separate, but important, discussion (Olsaretti 2009).[4] . The consequences of a given choice depend on a range of factors such as price structures, quality of care, the availability of insurance and the possibility of paying for treatment. In this regard the article introduces the idea of a responsibility-weighted queuing system and endorses co-payment and general taxation as a scheme for financing it. It would seem that oral health is one area, where people can and should in fact be held responsible for their health-affecting choices. In the latter regard, it is interesting that many European countries have separated oral health care from health care in general and financed it with a larger role for co-payment or out-of-pocket payment (Holst, Sheiham, and Petersen 2001, 114–115). Some, but not all, of this institutional arrangement is supported by a luck egalitarian theory of justice.

II. Luck Egalitarianism and health

This section surveys important developments in the luck egalitarian literature, especially

the tendency to argue that appearance notwithstanding the luck egalitarian theory does not have the counterintuitive harsh implications emphasized by critics. This is followed, in the next section, by an argument to the effect that while refraining from holding people responsible in a number of critical cases is appropriate on the luck egalitarian view, they are impotent with respect to the area of oral health under consideration. The intuition of luck egalitarianism is often taken to be captured in Derek Parfit's formulations that "it is bad if, through no fault of theirs, some people are worse off than others" (Parfit 1984, 26), or "[i]t is in itself bad if some people are worse off than others" ["through no fault or choice of theirs]" (Parfit 1998, 3). This formulation is unable to evaluate a number of distributions,[5] but a recent interpretation of luck egalitarianism asserts that distributions are just if, and only if, how well people fare, relative to others, reflects their exercises of responsibility (Knight 2009, 230: Lippert-Rasmussen 1999).[6]

In his seminal account of the luck egalitarian position, G.A. Cohen argues in line with the above formula that we should seek to eliminate "disadvantage for which the sufferer cannot be held responsible, since it does not appropriately reflect choices that he has made or is making or would make" (Cohen 1989, 916). To identify such involuntary disadvantages, we should ask whether a person facing a given disadvantage "could have avoided it or could now overcome it" (Cohen 1989, 920). According to Cohen, people should be compensated only for what they could not avoid. If in such instances they can now overcome it, we should subsidize their treatment, and if they cannot, they should be compensated to relieve its continued effect on their lives. Such traditional luck egalitarianism with emphasis on choice and luck is often described using Ronald Dworkin's famous distinction between brute luck and option luck. The latter concerns "how deliberate and calculated gambles turn out – whether someone gains or

loses from an isolated risk he or she should have anticipated and might have declined;" the former instances that are not such deliberate gambles (R. Dworkin 2000, 73). Luck egalitarianism is, in its standard interpretation, only concerned with extinguishing the differential effects of brute luck while it leaves the differences in option luck following from people's choices untouched (Rakowski 1993).

The interpretation of the distinction is still a subject for debate just as how the concepts can be separated in the evaluation of real world distributions. This also holds in a health care context. When taken to task for being too harsh on the victims of option luck, luck egalitarians can either claim that the specific disadvantage is not chosen or provide reasons why it should be compensated anyway. Prominent in the first category are those who argue, that luck egalitarians are committed to more distribution than its critics assume, because many inequalities are most plausible understood as caused by brute luck (Barry, 2008). In a health context it is uncontroversial to state, that luck egalitarians wish to compensate those who are worse off than others for reasons not reflecting their exercises of responsibility. This however seemingly leaves a range of situations, where people should be denied compensation because there situations adequately reflects the choices they have made (Voigt 2007). This would give rise to second category of reasons, arguing for compensation even though the disadvantage in question does reflect people's exercises of responsibility. Several such reasons have been suggested in the literature.

One argument of this kind stresses that regarding some choices it would be unreasonable for society to hold people responsible for the consequences. Cohen proposed to revise the luck egalitarian view to cater for such thoughts. According to Cohen, chosen disadvantages may require compensation when they reflect our values. The reason for this is that it would be

unreasonable to ask people to avoid making such choices (Cohen 2004; see also, Price 1999). Under the influence of such thoughts, Segall argues in his influential account of luck egalitarianism in health that we should compensate people for what it would be unreasonable to ask them to avoid. He further argues that compensation might be justified even for choices that we could reasonable ask people to avoid if people end up with unmet basic needs (Segall, 2010).

The appropriateness of accepting inequalities generated by differential option luck can also be questioned in a different manner. Lippert-Rasmussen argues that it may be proper to compensate some unfortunate gamblers (Lippert-Rasmussen 2001; Temkin 2011).[7] This may seem counterintuitive, since Ronald Dworkin maintains offers the reluctance to take away people's opportunity to take on risks by redistributing inequalities that arise through gambles as a virtue of luck egalitarianism (R. Dworkin 2000, 74–75). However, Kasper Lippert-Rasmussen has introduced a distinction between *gambles proper* and *quasi-gambles* that renders redistribution more plausible. In the latter gambles, the persons involved would have preferred the expected value of the gamble as opposed to risking the gamble. Proper gambles are well-known from casinos and race-tracks where the risk is part of the purpose (Lippert-Rasmussen 2001, 555). The argument against redistribution between winners and losers of gambles seems implausible when applied to quasi-gambles. When redistributing among quasi-gamblers, no one is asked to live a life they do not want, on the contrary, the individual's risks are pooled and minimized —risks each would prefer to live without.

It seems that luck egalitarians, who wish to argue for compensation to those whose health related choices make them worse off than others in regard to their oral health, have several options available. Besides from claiming the behaviour to be not sufficiently chosen (i.e.

reflecting people's exercises of responsibility), it is furthermore possible to argue for compensation when we could not reasonably expect people to avoid making such choices, when the consequences of such choices hamper people's satisfaction of basic needs or when the choices are best described as quasi-gambles. In what follows, these highlighted developments in the luck egalitarian literature will be evaluated in order to assert whether these different reasons for not holding people responsible are present in oral health. Though the different strands of luck egalitarianism are distinct in important ways, they are all considered in order to evaluate the widest possible range of luck egalitarian reasons to not hold people responsible for their own oral health.

III. Responsibility and oral health

In this and the next section, it will be argued that many of the reasons luck egalitarians give for not holding people responsible for their health are not present in the area of oral health. The discussion considers this in the context of two widespread and well-known sources of bad oral health: periodontal disease and carries. It starts out by evaluating the most straightforward claim, regarding the presence responsibility-diminishing influence from social or natural circumstances on people's oral health. A proposal is put forward to how we can plausibly assess people's degree of responsibility in this context. Afterwards, drawing on the development of the luck egalitarian literature the following reasons for compensating people for their choices is considered: that inequalities in oral health reflect choices we cannot reasonably expect people to avoid, that choices regarding oral health brings about distributions where people's basic needs are not met and that inequalities in oral health can be described as quasi-gambles that allow for redistribution between 'takers' of such gambles.

Responsibility-diminishing circumstances

First in any debate over responsibility and health are discussions over whether people are responsible for the choices that affect their health (cf. Barry 2008; Kaufman 2004). If it could be shown that people are not responsible for their oral health, luck egalitarianism would consider it unjust to hold them responsible for it. In oral health, we have good reasons to examine this discussion thoroughly. Regarding consumption choices it is relevant whether they had a healthy alternative at a reasonable price and whether their preference for certain sugary foods can be related to habits instilled in childhood (Mennella et al. 2010) . Regarding choices in oral hygiene, it could be pointed out, that social circumstances affects people's capacities for taking care of their oral health through unequal distribution of knowledge about oral hygiene (Lee et al. 2012) or factors related to childhood upbringing (Dye et al. 2011; Pieper et al. 2012; Schou, Currie, and McQueen 1990)). The argument to be considered is whether, people are, in the relevant sense, responsible for suffering from bad oral health through periodontal disease and carries. It is assumed here, following Cohen, that the basic egalitarian question is whether the disadvantages from which people suffer could initially have been avoided.

Periodontal disease is a gum disease caused by a build-up of plaque on the teeth. Plaque can be bad for the gum health, leading to soreness, inflammation and with a possibility of evolving into more severe gum diseases such as periodontitis, which among other things can lead to damage of the tissue that connects the tooth to the socket, receding gums, loose teeth and loss of teeth (NHS, 2012). Periodontal disease is widespread: In UK 54 per cent of adults over 16 had moderate signs of periodontal disease (Department of Health, 2005: 14). In

Germany 70.9 per cent of adults aged 35–44 (Holtfreter et al., 2010), and surveys from the US indicates that over 50 per cent of the population has periodontal disease (Oliver et al., 1998). To understand whether a person could have avoided periodontal disease, it is necessary to find out what causes it. Periodontal disease is, since it is caused by bacteria on the teeth, avoided through by oral hygiene (Hioe and van der Weijden 2005; Sambunjak et al., 2011). Studies further suggest that dental visits have a positive effect in that regard (Ljaljević et al., 2012), and others stress the role of knowledge (van der Weijden and Hioe 2005). In supplement to the discussion of oral hygiene, it should be mentioned that there is little evidence for an association between diet and periodontal disease (Moynihan and Petersen 2004, 203). Though people's level of periodontal disease is, all things equal, related to their own choices in tooth brushing, all things are in many ways not equal. People's oral health is affected by both natural and social circumstances making it harder for some than for others to avoid periodontal disease. If we first consider the social factors, periodontal disease shows a social gradient (Zini, Sgan-Cohen, and Marcenes 2011). This means that the burden of disease in unequally spread in society, and indicates that social factors contribute to this unequal distribution. Furthermore, alcohol (Lages et al. 2012) and cigarette smoking are considered risk factors for periodontitis (Johnson and Hill 2004; Klinge and Norlund 2005; Tonetti 1998).[8] Apart from such arguably social factors, the presence of periodontal disease is also associated with several natural factors. It is well documented that the ability to avoid periodontal disease is worsened by the presence of some specific diseases. Among those are diabetes (Almeida Abdo et al. 2013; Matu, Stephen, and Lalloo 2009; Mealey and Oates 2006) and Paget's disease (Sundaram et al., 2012). Periodontal disease is also known to be widespread among people with intellectual and developmental disabilities (Fisher 2012;

Moreira et al. 2012)

Consider next, in a similar fashion, the factors influencing the development of dental carries. This is an infection that causes demineralization of the hard tissues and destruction of the organic matter of the tooth. It is usually brought about through the production of acid by bacteria accumulated on the tooth surface (Selwitz, Ismail, and Pitts 2007). Developed carries can lead to both pain and tooth loss and is as such cause for bad oral health. Dental caries is a major health problem in most industrialized countries and affects 60–90 per cent of school-aged children and the vast majority of adults (Petersen et al., 2005).

In several ways, the development of carries is contingent on human behaviour and thus, to some extent, avoidable. Caries is related to sugary diet and negligent tooth brushing (Chankanka et al. 2011; Reisine and Psoter 2001; Steyn and Temple 2012), this is also the case among children (Harris et al. 2004) . However, the relationship is yet again altered and affected by social factors such as the diet of the mother (Tanaka et al., 2012), childhood factors (Pieper et al. 2012) and social status (Boyce et al., 2010; Dye et al. 2011; Chankanka et al., 2011; Ferro et al., 2012). As such, people's oral health is affected by other factors than their own choices (and their choices are also affected by these factors). Apart from social circumstances, caries is also affected by natural circumstances. Reduced production of saliva in the mouth is among the prominent causes for caries. Saliva serves as a natural defence against caries (Kościelniak et al. 2012) . Thus a number of diseases make the particular individual more vulnerable to caries and its adverse effects by reducing the natural production of saliva. Among such diseases are Sjögren's syndrome (Mathews, Kurien, and Scofield 2008; Pedersen, Bardow, and Nauntofte 2005) , diabetes (Bajaj et al. 2012; Jawed et al. 2012). Other diseases are known risk factors for carries, including types of cancer treated

with chemo and radiography (Michelet 2012).

Whether or not a given individual suffers from caries and/or periodontal disease is contingent on a wide range of factors, including individual behaviour. Some of these factors are indeed beyond the control of the individual, while others are highly manageable, though requiring knowledge and the correct application of materials (e.g. toothpaste, toothbrush). When considering the social and natural factors affecting whether one suffers from bad oral health through caries or periodontal disease, it is clearly necessary for a luck egalitarian approach to take into account that social and natural factors differently affect people's oral health, and also makes it harder for some than for others to make the healthy choices to avoid suffering from bad oral health as caries and/or periodontal disease.

The Roemerian approach to assessing responsibility

The following section presents an approach inspired by the work of John Roemer (Roemer, 1993; 1998; 2012). In the foregoing section it was concluded that in order to evaluate people's degree of responsibility for their periodontal disease and dental caries, luck egalitarianism must take into account how this is not only affected by their own choices but also by social and natural circumstances. Roemer's approach will be presented as a principled solution to this, and practical objections will be discussed at the end of the article. Roemer's approach is distinctively luck egalitarian, since he argues

> that society should indemnify people against poor outcomes that are the consequences of causes that are beyond their control, but not against outcomes that are the consequences of causes that are within their control, and therefore for which they are personally

responsible (Roemer, 1993: 147).

In order to assess people's responsibility Roemer proposes to classify the population into different types consisting of people with the same/similar circumstances (Roemer, 1993: 150; 2001: 449; 2003: 261; 2012: 168). Within each type is a distribution of effort, because people in similar circumstances differ in how much they do to avoid a bad/obtain a good. When evaluating people's exercise of responsibility, we should compare them to people of the same type by observing who has shown the highest degree of effort (Roemer, 1998: 11). It is also possible to compare the exercise of responsibility in different types of people. Two people from different types varying equally from the median[9] of their respective type are deemed to have exercised a comparative degree of responsibility (Roemer, 2001: 450; see also: Roemer, 1993: 151–152; 2012: 169). The key point in both forms of comparisons is that whether one is, in the relevant sense, responsible for such choices, depends on how these choices vary from the choices of people in comparable circumstances.

Roemer illustrates his position in relation to smoking and lung cancer (Roemer 1993, 150). He asks us to consider a black male steelworker and a female college professor, both 60 years of age and both now suffering from lung cancer. The former has been smoking for 25 years, while the latter only smoked for eight years. For simplicity, we can assume they belong to types of black male steel workers and female college professors, respectively. Within each type, the distribution of cigarettes per day varies across a median. Assuming that each year as a smoker involves an increased risk of getting lung cancer, how are we to assess the responsibility for the smoking behaviour of the two individuals? Roemer suggests that we do not compare their absolute level of effort but rather their degree of effort, which allows us to

compare how much (if any) they deviate from the median of their type. This is significant if, as we would expect, the distribution of years smoked among black steel workers varies around a higher median than that of the college professors. If the two persons have both smoked the median number of years (or deviates from it in a comparable way), then society should treat them as equals despite their different absolute levels of effort (Roemer 1993, 152).

How is Roemer's approach applicable to oral health? In accordance with the discussion of social factors when discussing caries and periodontal disease, the following seems appropriate: age, social class and parent's education. IQ or education level as a proxy for knowledge should be included to account for that influence. Using these factors, people can be classified as belonging to a specific type depending on their score on the relevant factors. A second issue concerns how to include the identified natural factors (e.g. the specific illnesses mentioned previously). Let us for the sake of simplicity assume the existence of a finite number of illnesses, which people cannot help having. These diseases affect people's oral health by making them more prone to periodontal disease and/or caries, through increasing the adverse effect of neglectful brushing of teeth and/or having a sugary diet. In other words, more is required of some people than of their peers to maintain good oral health. In light of this it seems plausible to expand the concept of type in order to permit compensation for differences caused by natural circumstances. The Roemerian approach presented above can serve as a principled guide to how we can assess and compare people's degree of effort to avoid caries and periodontal disease. The purpose of doing so is to filter out the social and natural causes of bad oral health, for which luck egalitarians would find it unjust to hold people responsible. Roemer's approach seems a promising candidate for doing so, while still being able to compare people's degree of effort. This approach has been criticised for both

practical and principled reasons. The practical reasons are mainly offered in the form of doubts over the extent to which this approach is manageable and possible to implement. To address such concerns a sketch will be presented in the last part of the paper, dealing with how we are to implement the ideas presented here in a workable way that tracks the luck egalitarian notion of justice.

IV. Considering further reasons for not holding people responsible

As argued above, individual choices affect oral outcomes when considering the two widespread courses for bad oral health, caries and periodontal disease. A Roemerian approach can filter out those whose bad oral health is due to social or natural factors. We now consider those, who are responsible for their own bad oral health, in the light of luck egalitarian reasons for not holding people responsible for the consequences of their own choices. Whereas the above discussion focuses on whether people's oral health is a result of their own choices, this part of the discussion is somewhat different. It offers reasons for not holding people responsible for their own choices and for the consequences of these, even when they are responsible for them in the relevant Roemerian sense.

Reasonable avoidability

Shlomi Segall proposes a reason to not hold people responsible for their choices, following Cohen's 2004-revision of luck egalitarianism. Explicitly addressing situations where a person is responsible for his own level of health, he argues that there may be situations when this condition is not sufficient to hold a person responsible for his level of oral health. Segall argues that what matters is not whether something is chosen, but whether it would be

reasonable to expect a person to avoid it. This allows us to compensate those who make the choices we, as a community, want people to make, though doing so involves a considerable risk for themselves (Segall 2010, 20).[10]

Elaborating on Segall's view we can identify three different reasons for not considering it reasonable to hold people responsible for the choices they have made regarding their oral health.[11] The first reason is that these choices are of value to the community, the second that they are of value to the individual[12] and the third is related to the degree of complexity involved. Considering these different reasons for not holding an individual responsible for his choices, the first seems hard to uphold in the context of oral health. In the literature on health, voluntary firemen are cited as an example of persons who risk being worse off through their own choices, nevertheless, they should not be asked to bear the consequences of their choices since they are of great value to the community (Veatch 1980, 53). Though present in the debate over health in general, very few people are able to say that they risk getting caries or periodontal disease as an integral part of their valuable contribution to society. Consider construction workers who eat their lunch while sitting on beams high above the ground. They do not, presumably, have the opportunity to brush after their meal. But since they only need adequate tooth brushing twice a day, they could presumably brush before and after their work shift. Most jobs, however intense, extreme and without breaks we imagine them, start and end at some point during the day. Brushing before and after should be a possibility. Some employments do involve risk to oral health, but in a way that is different from those arising through caries and periodontal disease considered here (i.e. certain participants in professional sports such as boxing and ice hockey, and people employed in military or police jobs risk losing their teeth[13]) If we then consider what could be called risky choices that are

valuable to the considered persons who, though they adversely affect their oral health, make the choices then they should not be held responsible because it would not be reasonable for society to expect them not to choose as they did. It seems hard to identify value-based choices that negatively affect people's oral health, where the consequences could not be avoided by thoroughly brushing ones teeth, and where we could not reasonably expect people to undertake this effort. One could argue that many parts of the Christmas tradition in western countries involve a large consumption of sugary food, and thus risk of caries, but one could hardly argue that it is unreasonable to ask people to pay special attention to tooth brushing during Christmas.

The third relevant consideration is the level complexity. It seems reasonable to suggest that complexity in different forms can be offered as a reason for not holding people responsible for their own choices. Some risks associated with specific human behaviour are either too vague to casually relate to a person's health, too hard to comprehend or too difficult and/or costly to avoid undertaking. Therefore it seems perfectly plausible to claim that it would be unreasonable to hold people responsible for their own level of health under such conditions. However, considering oral health, it seems reasonable to suggest that the large majority of adult people are able to understand how to brush their teeth and the effects of avoiding sugary food, which is not expensive to do. The relevant actions do not seem that complex to perform. None of these acts are especially difficult, though it should perhaps be admitted that some people's desire to eat food bad for their oral health can be instilled in them from childhood. But to have such desires instilled would make it more plausible to suggest that the relevant act is less chosen (and thus compensable on grounds of justice), rather than making it an actual choice that would be unreasonable not to compensate. The

idea of reasonable avoidability does not give us good reasons why people should not be held responsible for the part of their caries and/or periodontal disease that can be ascribed to their own choices.

Unmet basic needs

Segall proposes another reason for not holding people responsible for their choices. He addresses instances where people suffer due to choices that it would be reasonable to expect them to avoid. He argues that even though we do not owe such people anything as a matter of distributive justice, we can offer them assistance on other grounds. One such ground could be charity or, as Segall prefers, our duty to meet people's basic needs (Segall 2010, 69). So compensation for people's choices (including choices we could reasonably expect them not to make) is just if those choices bring about a situation in which a person's basic needs are not met. Regarding choices pertaining to oral health, it seems clear that only in extreme cases will they result in deprivation of basic needs such as not being able to eat and speak. Even in such cases, the process leading up to them is remarkably different from the reckless driver who neglected to put on his helmet. In that famous example, one moment of neglect has disastrous consequences; it seems that in the case of oral health, at least understood as suffering from caries or periodontal disease, it will more often be a whole series of neglectful choices over a longer period of time. This makes a difference and also suggests that only in very few cases will people's choices lead them to a state of oral health in which their basic needs are unmet. However, it does suggest, in line with the discussion of reasonable avoidability, that perhaps there is a need for a different discussion regarding people who suffer from missing teeth after work-related injuries, violence or traffic incidents. This separate discussion will not be

pursued here and the conclusions made are not necessarily applicable to those areas of oral health.

Oral health gambles as quasi- gambles

A final reason for compensating people whose bad oral health reflects their choices and bad option luck can be found in Lippert-Rasmussen's idea of quasi-gambles and gambles proper. Where the latter are gambles of which excitement (and the risk of them turning out bad) are part of our reasons for engaging in them, the former are gambles where we would prefer the expected value of the gamble to taking on the risk (Lippert-Rasmussen 2001, 555). In the context of oral health it is interesting to discuss whether the choices involved are best understood as quasi-gambles. The touching stone should be whether people involved in gambles with their oral health would prefer the expected value of such gambles to the risk of bad oral health. If behaviour that is bad for oral health, such as the consumption of sugary food and the neglectful brushing of teeth, could be classified as quasi-gambles, this could serve as vindication of redistribution among those partaking in such gambles. In examining whether behaviour associated with bad oral health should be considered as quasi-gambles, two main features seem necessary to consider. The first is whether the thrill from the risk of losing the gamble is an integral part of taking the gamble; the second is whether it is reasonable to say that one would have preferred the expected outcome of the gamble rather than taking on the risk.

Considering the thrill, the verdict is straightforward. There seems to be no thrill at all involved in risking one's oral health due to consumption of sugar or not brushing ones teeth. Based on that criterion, it seems fair to consider these as quasi-gambles. However, the term

"to prefer the expected value" seems harder to reconcile with the oral health cases considered here because of uncertainty over, what counts as the expected values of such gambles. It is far from clear what it means to prefer the expected value of neglectful teeth brushing or a sugary diet. But perhaps we can understand the expected value of such gambles, as irritation, bleeding gums and occasional pain – but note that there is also the risk of it turning out much worse (e.g. severe pain, inability to eat/sleep). It is the risk for the latter outcome, that does not include a thrill and which people would presumably prefer to live without. If this serves as a reasonable description of gambles over oral health, then they could presumably be described as quasi-gambles.

This article has considered different luck egalitarian reasons for not holding people responsible for choices that badly affect their oral health. Thus, it seems reasonable to conclude that in regard to important causes of bad oral health, such as caries and periodontal disease; not holding people responsible for such choices receives little support. The strongest candidate for some redistribution was the argument that the choice affecting oral health could be classified as quasi-gambles. An argument, it must be stressed, that is only open to those luck egalitarians sometimes referred to as all luck egalitarians (Segall 2010, 45-57).[14]

V. HOLDING PEOPLE RESPONSIBLE FOR THEIR ORAL HEALTH

After having examined how we can assess people's responsibility for their oral health and discussed different reasons from luck egalitarian literature for not holding people responsible after all, it seems timely to discuss how the presence of responsibility for such oral health deficits should be allowed to affect people's level of advantage. Introducing a Roemerian system to access people's exercises of responsibility is indeed difficult. At the most basic level

society should strive to provide information, education and eradicate the social circumstances influencing people's oral health (Albertsen, 2012). But even on this background, it would still be necessary to assess people's different exercise of responsibility in order to let them fare in accordance with that. The model most fit for this seems to be a system of exemptions, where people in certain circumstances are treated differently from people than people who cannot cite such conditions as reasons for their bad oral health. For example, when we know that some types of cancer treatment are very bad for people's oral health; those undergoing such treatments should not be held responsible for their bad oral health. The same could be said for certain social conditions and could also be used to provide free care for children, mentally ill and for people very disadvantaged by social circumstances. Such exemptions from holding people responsible could be based on easily attainable information. The system would not as such assign people to certain types, but would use available information about their social and natural circumstances, to determine if they should be held responsible for their bad oral health. This proposal is both sketchy and rough, but in such discussions it should be recalled that many (if not all) arrangements of health care systems fail to completely track their guiding moral principles (e.g. people are both over- and undertreated in systems treating in accordance with need).

Finally, something must be said about the different ways of holding people responsible in cases where the Roemerian approach considers them to be so (and other considerations allows us to do so). Inspired by Gerald Dworkin, issues such as to deny people treatment, to arrange queuing after responsibility and to introduce different measures of co-payment for people responsible for their own oral health needs will be considered (G. Dworkin, 1981). Considering first the idea of denying treatment, this ensures that their oral health

corresponds to their exercise of responsibility, but removes their opportunity for restoring their oral health by paying for that restoration themselves. Such a solution is one possibility, but fits badly with the luck egalitarian idea that how well people fare, relative to others, should reflect their exercises of responsibility. Luck egalitarians are not committed to the view that neglectful exercise in oral health must translate into inequalities in oral health. If people prefer to transform it to a monetary inequality, then luck egalitarians should not seek to eliminate that possibility.

Another measure to discuss is a system that allocates one's place on the waiting list in accordance with whether or not one is deemed to be responsible for one's level of oral health. The system can be arranged in many ways. A very rigid system moves everyone with some sort of responsibility for their own oral health backwards, so that no one with some responsibility for their oral health is treated prior to a person without such responsibility. A more moderate suggestion would be to introduce a responsibility-weighted waiting list where people with comparable needs, but who have exercised responsibility, are treated in order depending on their comparable exercises of responsibility. The weighted-system should be preferred because if you send persons who are responsible for their own oral health to the back of the queue, it could, in effect, come close to denying these people treatment. But weighting the waiting list seems to fit nicely with luck egalitarian ideals.

Where the above considered the allocation of scarce resources in health care, the following involves measures that affect how the burden of financing these resources is distributed across the population. One way of financing would be to introduce out-of-pocket payments for those who are responsible for their own bad oral health. Most luck egalitarians would be able to endorse such measures. Since luck egalitarians are not only interested in

redistribution among people whose health reflects differential exercises of responsibility, it would also be a possibility to tax people who have good brute luck in other parts of life in order to finance those suffering from bad brute luck in oral health. Luck egalitarians persuaded by the idea of all luck egalitarianism would want to supplement this with specific taxes on some unhealthy products earmarked to dental care for those who have bad oral health. The purpose such an arrangement would be to increase the extent to which all those who undertake quasi-gambles with their oral health contributes to financing the treatment of those, who fall ill as a consequence of such gambles.

VI. Conclusion

In many ways, luck egalitarianism can contribute to our evaluation of distributions in oral health. How people fare with respect to widespread and important causes of bad oral health, caries and periodontal disease, is contingent on individual behaviour as well as natural and social circumstances. People's degree of responsibility can be accessed from a Roemerian approach modified to filter out the effects of natural and social circumstance. When considering luck egalitarian reasons for not holding people responsible for their oral health, only the all luck egalitarian conception of quasi-gambles had some merit. In deference to those findings, luck egalitarians seem well fit to recommend institutional arrangements of oral health care that raise revenue through co-payment, general taxation and, for all luck egalitarians, specific taxes on unhealthy activities. These scarce resources should be prioritized in a responsibility-weighted queuing system that serves to compensate persons for natural and social disadvantages, while holding them responsible for their risky choices and at least partly for the costs arising from such choices.

NOTES

[1] The principles guide us in evaluating whether distributions are just, they do not tell us whether these distributions should be left untouched in deterrence to other values beside distributive justice (Cohen, 2004; Stemplowska, 2009). In the practical recommendations of this article it is the hope, that such other considerations are given sufficient attention.

[2] Riding my bike to work could be considered a quasi gamble, since it evolves a risk, but the thrill of it turning out bad is not part of my reasons for engaging in the gamble.

[3] Furthermore, oral health is of symbolic importance. Bad oral health (e.g. black or missing teeth) is considered shameful and thus contributes to stigmatizing those who experience it (Bedos, Levine, and Brodeur 2009; Treadwell and Northridge 2007; Vargas and Arevalo 2009, 400).

[4] The literature gives many suggestions to how to draw such a distinction, the subtle differences between these views will not be treated in this article (Hart 1968; Knight 2011, 157; Roemer 1998, 17; Scanlon 1998; Stemplowska 2011). Nicole Vincent has recently emphasized the need for such a distinction in the discussion of health (Vincent 2009, 50).

[5] See, for example, (Hurley 2005, chap. 6; Lippert-Rasmussen 1999, 478; Vallentyne 2002; 2003, 169).

[6] One implication of this formulation is that equalities and not reflection choice may be unjust. Some resist this understanding of Luck Egalitarianism (Segall 2010; 2011), but others (including this author) believe that there are good reasons to affirm it (Albertsen and Midtgaard 2014).

[7] See also suggestions by (Cappelen and Norheim, 2005; 2006; Le Grand 1991).

[8] Some evidence still questions the causality (S. Fisher et al., 2008), and it must be admitted that whether the effects of smoking count against people having responsibility for their periodontal disease is contingent on considerations over the relationship between responsibility and smoking; a task that cannot be undertaken in this article.

[9] In his recent treatment of the topic, Roemer talks of the mean instead of the median. The consequences of this shift of emphasis is unimportant for this article (Roemer 2012). Note also that Roemer hesitates to apply his proposal to health.

[10] Similar points can be found elsewhere (Dworkin, 1981; Stemplowska, 2008: 244; Veatch, 1980: 53).

[11] This elaboration is not a direct application of Segall's later statement of his concept of reasonable avoidability, but if different Segall's view would allow for less redistribution that the elaborated view examined here. (Segall, 2012)

[12] A position also criticized from inside the luck egalitarian (Hansen and Midtgaard, 2011; Knight, 2009: 52–54),

[13] I am grateful to Morten Brænder for bringing the case of military personnel to my attention.

[14] All Luck Egalitarianism is not a homogeneous strand of thought, a version of it also requiring redistribution towards those undertaking proper gambles have been proposed by Carl Knight (Knight, 2013)

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