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

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Luck egalitarianism is often taken to task for its alleged harsh implications. For example, it may seem to imply a policy of non-assistance toward 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, it seems, is 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 copayment and general taxation among its measures of financing.

Keywords: *dental care, lifestyle diseases, luck egalitarianism, oral health, personal responsibility*

I. INTRODUCTION

Luck egalitarianism asserts that distributions are just if, and only if, how well people fare relative to others reflects 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 principle states that people who are relatively worse off, in a way that does not reflect their exercises of responsibility, should be compensated; the latter principle states that differences between people that reflect 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, 2015; Albertsen and Knight, 2015; Cappelen and Norheim, 2005; Cappelen and Norheim, 2006; Le Grand, 2013; Segall, 2007, 2010, 2011b, 2012). It has famously been argued that luck egalitarianism must refuse to compensate those who make imprudent choices (Fleurbaey, 1995, 40; Anderson, 1999). Such critics ask whether it is just for society to refuse to treat the reckless motorcyclist who drives without a helmet and is severely injured in a crash. Since many luck egalitarians wish to resist this conclusion, and since many make imprudent choices, health may be considered a hard case for luck egalitarianism, and for those and other reasons many remain unconvinced of its viability in a health care context (Feiring, 2008; Wikler, 2004; Venkatapuram, 2011; Nielsen, 2012; Nielsen and Axelsen, 2012; Andersen et al., 2013; Brown, 2013). As explored in Section II, 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 into 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 argument that people's choices are so heavily influenced by circumstances that they should not be considered exercises of responsibility and, thus, people are eligible for compensation. The second category consists of different arguments for why we should dispense with the principles of reward and compensation for some choices, 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 implies that redistribution among quasi-gamblers is just.

Section III discusses whether these reasons are relevant in the context of adult oral health, specifically, in the context of two widespread and well-known sources of bad oral health: periodontal disease and caries. It is concluded that these reasons are less present in this context, so that in most cases people should be held accountable for their choices. Oral health should be considered a subject of importance, because bad oral health can worsen a person's well-being significantly by inflicting pain and reducing his/her ability

to sleep and chew (U.S. Department of Health and Human Services, 2000; Dharamsi and MacEntee, 2002; Chavers, Gilbert, and Shelton, 2003; Vargas and Arevalo, 2009).[3] Bad oral health unequally affects people's lives (U.S. Department of Health and Human Services, 2000; Shaw 2002; Thomson et al., 2004; Sisson, 2007; Geyer, Schneller, and Micheelis, 2010). In order to evaluate such inequalities, a luck egalitarian approach inspired by John Roemer is introduced to assess whether people are in fact responsible for their choices by comparing their choices to those of their peers. Having ascertained who is responsible, Section IV evaluates whether such choices are of a kind that allows for compensation, in light of recent arguments by prominent egalitarians. 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 choices affecting oral health could be classified as quasi-gambles.

Even though one might deem a person to be responsible for his/her actions that affect 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, 2013).[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, Section V introduces the idea of a responsibility-weighted queuing system and endorses copayment 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 this respect, it is interesting that many European countries have separated oral health care from health care in general and financed it with a larger system of copayment or out-of-pocket payment (Holst, Sheiham, and Petersen, 2001, 114–115). Some of this institutional arrangement, but not all, 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. 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 (Lippert-Rasmussen, 1999; Knight, 2009, 230).[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 be cured, 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 an 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 are instances that are not such deliberate gambles (Dworkin, 2000, 73). Luck egalitarianism is, in its standard interpretation, only concerned with extinguishing the differential effects of brute luck, whereas it leaves the differential effects of option luck untouched (Rakowski, 1993).

The interpretation of the distinction is still a subject for debate, such 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 plausibly 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 relatively worse off for reasons not reflecting their exercises of responsibility. This, however, seemingly leaves a range of situations where people should be denied compensation because their situations adequately reflect the choices they have made (Voigt, 2007). This would give rise to a second category of reasons that support compensation, even though the disadvantage in question does reflect people's choices. One argument of this kind stresses that, regarding some choices, it would be unreasonable for society to hold people responsible for the consequences of their choices. 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 (Price, 1999; Cohen, 2004). 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 (Segall, 2010, 20). He further argues that compensation might be justified even for choices that we could reasonably 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 considers it a virtue of luck egalitarianism to *not* take away the opportunity to take on risks by redistributing inequalities that arise through gambles (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 quasi-gambles, the persons involved would have preferred the expected value of the gamble as opposed to risking the gamble. Proper gambles are well-known, that is, gambles at casinos and race-tracks, where the risk is part of the purpose of the gamble (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 he does 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 claiming the behavior to be not sufficiently chosen (i.e., reflecting people's exercises of responsibility), it is also 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 determine whether these different reasons for not holding people responsible are present in oral health. Although 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 caries. This section starts out by evaluating the most

straightforward claim regarding the presence of responsibility-diminishing influences which proceed from the effect of social or natural circumstances on people's oral health. A proposal is put forward for 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 are considered: that inequalities in oral health reflect choices we cannot reasonably expect people to avoid, that choices regarding oral health bring 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 there are discussions about whether people are responsible for the choices that affect their health (Kaufman, 2004; Barry, 2008). 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 people 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 affect 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 (Schou, Currie, and McQueen, 1990; Dye et al., 2011; Pieper et al., 2012). The argument to be considered is whether people are, in the relevant sense, responsible for suffering from bad oral health through periodontal disease and caries. Following Cohen, the 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 and inflammation, and it has 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 (National Health Service, 2012). Periodontal disease is widespread: in the United Kingdom 54% of adults over 16 had moderate signs of periodontal disease (Department of Health, 2005, 14), and in Germany 70.9% of adults aged 35–44 did (Holtfreter et al., 2010). Surveys from the United States indicate that over 50% of the population has periodontal disease (Oliver, Brown, and Löe, 1998). To understand whether a person could have avoided periodontal disease, it is necessary to find out what causes it. Periodontal disease can be avoided through oral hygiene,

since it is caused by bacteria on the teeth (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). Further, it should be mentioned that there is little evidence for an association between diet and periodontal disease (Moynihan and Petersen, 2004, 203). Although people's level of periodontal disease is related to their own choices in tooth brushing, all things being equal, 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 is 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 (Tonetti, 1998; Johnson and Hill, 2004; Klinge and Norlund, 2005).[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 (Mealey and Oates, 2006; Matu, Stephen, and Lalloo, 2009; Almeida Abdo et al., 2013) 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 caries. 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 caries can lead to both pain and tooth loss and is, as such, a cause for bad oral health. Dental caries is a major health problem in most industrialized countries and affects 60%–90% of school-aged children and the vast majority of adults (Petersen et al., 2005).

In several ways, the development of caries is contingent on human behavior and thus, to some extent, avoidable. Caries is related to sugary diet and negligent tooth brushing (Reisine and Psoter, 2001; Chankanka et al., 2011; Steyn and Temple, 2012), this is especially 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; Chankanka et al., 2011; Dye et al., 2011; Ferro et al., 2012). As such, people's oral health is affected by factors other 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 defense 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 and (Pedersen et al., 2005; Mathews, Kurien, and Scofield, 2008) diabetes (Bajaj et al., 2012; Jawed et al., 2012). Other diseases are known risk factors for caries, 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 behavior. Some of these factors are most plausibly understood as beyond the control of the individual, whereas others are highly manageable, though they require 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 that such factors make it harder for some than for others to make the healthy choices that could avoid caries and/or periodontal disease.

The Romerian 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 established 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 classifying the population into different types consisting of people with the same or 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, 151–2; 2012, 169). The key point in both forms of comparisons is that whether one is responsible for such choices, in the relevant sense, 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, whereas the latter only smoked for 8 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 behavior 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 college professors. If the two persons have both smoked the median number of years (or deviate 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 relevant to caries and periodontal disease, the following factors seem relevant: 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 to be a promising candidate for doing so, while still being able to compare people's degree of effort. This approach has been criticized

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 that deals 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 importantly affect oral outcomes in the cases of 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 their consequences, 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, Segall argues that there may be situations when this condition is not sufficient to actually hold a person responsible for his level of 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 that 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 is that these choices 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).

Although 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 as we imagine them, start and end at some point during the day. Brushing before and after should be a possibility. Some jobs 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]). We might then consider whether there are choices which both adversely affect a person's oral health and which society would not expect a person to avoid because they reflect that person's conception of the good life. 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 one's 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 of 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 behavior 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 what the effects of avoiding sugary food are, which is not expensive to do. The relevant actions do not seem that complex to perform. None of these acts is 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) is 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 touchstone 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 behavior 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 behavior 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 one's 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 or 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 section has considered different reasons from the luck egalitarian literature for why we should not hold people responsible for choices that badly affect their oral health, even if they are responsble for them in the sense examined earlier. 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 is the argument that the choice affecting oral health could be classified as quasi-gambles. This is 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 and education and to eradicate the social circumstances influencing people's oral health (Albertsen, 2012). But even against 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 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, for the 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 allow us to do so). Inspired by Gerald Dworkin, issues such as denying people treatment, to arranging queuing after responsibility, and introducing different measures of copayment for people responsible for their own oral health needs will be considered (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 into 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.

Whereas 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 of such an arrangement would be to increase the extent to which all those who undertake quasi-gambles with their oral health contribute 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 behavior 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 has some merit. In deference to those findings, luck egalitarians seem well fit to recommend institutional arrangements of oral health care that raise revenue through copayment, 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 deference to other values besides distributive justice (Cohen, 2004; Stemplowska, 2009). In the practical recommendations of this article, it is hoped that such considerations are given sufficient attention.

2. Riding my bike to work could be considered a quasi-gamble since it involves a risk, but the thrill of it turning out poorly 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 (Treadwell and Northridge, 2007; Bedos, Levine, and Brodeur, 2009; Vargas and Arevalo, 2009, 400).

4. The literature gives many suggestions as to how to draw such a distinction. Consequently, the subtle differences between these views will not be treated in this article (Hart, 1968; Roemer, 1998, 17; Scanlon, 1998; Knight, 2011a, 157; Knight, 2005, 63; 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, chapter 6); Lippert-Rasmussen (1999, 478); Vallentyne (2002, 2003, 169).

6. One implication of this formulation is that equalities and not reflected choice may be unjust. Some resist this understanding of luck egalitarianism (Segall, 2010, 2011a), but others (including this author) believe that there are good reasons to affirm it (Albertsen and Midtgaard, 2014; Knight, 2011b).

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

8. Some evidence still questions the causality (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 consequence 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 (Veatch, 1980, 53; Dworkin, 1981; Stemplowska, 2009, 244).

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 than the elaborated view examined here (Segall, 2012).

12. This is a position also criticized from inside the luck egalitarian literature (Knight, 2009, 52–54; Hansen and Midtgaard, 2011).

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

14. Luck egalitarianism is not a homogeneous strand of thought. A version of it requiring redistribution toward those undertaking proper gambles has been proposed by Carl Knight (Knight, 2013).

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