

<http://hdl.handle.net/1765/111331>



Nudge me, help my baby: On other-regarding nudges

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Abstract

There is an increasing interest in the possibility of using nudges to promote people's health. Following the advances in developmental biology and epigenetics, it is clear that one's health is not always the result of one's own choices. In the period surrounding pregnancy, maternal choice behaviour has a significant influence on perinatal morbidity and mortality as well as the development of chronic diseases later in life. One's health is thus a matter of one's own as well as one's maternal choices. Therefore, self-regarding and other-regarding nudges should be considered as viable strategies to promote health. In this article, we introduce the concept of other-regarding nudges. We use the harm principle and the principle of beneficence to justify these other-regarding nudges. We conclude by stressing the importance of a fair assessment of expectations towards the nudgee, when determining whether a nudge is aimed at preventing harm or promoting a good.

Introducing: other-regarding nudges

Fast and frugal rules of thumb or heuristics as they are called are cognitive processes that ignore part of the available information to make efficient decisions.⁽¹⁾ Heuristics are a powerful tool when it comes to making good inferences about the world under limited time and information. ⁽²⁾ Despite their usefulness however, decisions based on heuristics can arguably also be detrimental, for example, to one's health. Choosing unhealthy food despite one's intention to eat healthy and taking the elevator instead of the stairs to one's sedentary office job are examples of this 'surrender' to heuristics.

A well-known strategy that uses heuristics to the benefit of choice-makers is nudging. A nudge is defined as "any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives"⁽³⁾ There is an increasing interest in the possibility of using nudges to encourage people to make healthier choices.⁽⁴⁾ Poor health however, can't always be traced back to one's own choice-behavior. Perinatal morbidity (and mortality) and chronic diseases – two major challenges for healthcare and public health – are at least to a certain extent the result of *other* people's choices, in the case we discuss, parental choices.^(5, 6) Although the origins of perinatal morbidity and chronic diseases are multifactorial with in part unclear causal chains, there is an increasing amount of evidence suggesting that the health of the mother during the period surrounding pregnancy influences the risk of developing these poor health outcomes.⁽⁷⁻⁹⁾ Policy and interventions aimed at empowering mothers-to-be, have a great potential to promote healthy pregnancies and reduce the risk of developing chronic diseases.^(10, 11) This opens up the possibility of introducing nudges that encourage parents, mothers in particular, to make choices that benefit the health of their future children. The aim of this paper is to explore the justification of nudges where the principal but not necessarily sole beneficiary of the nudge is *not* the nudgee, in this case the mother, but her future children. We will call these nudges other-regarding nudges. We will use nudges aimed at promoting the health of the future child as a case study. Therefore the scope of this article will be limited to other-regarding nudges that are aimed at promoting the health of the future child by altering the choice-behavior of the mother. Like all nudges, these other-regarding nudges are not meant to replace but to complement policy, in this case to complement policy to improve maternal and fetal health.

First we provide a short overview of the relation between the development of the unborn, perinatal morbidity and chronic diseases later in life. Subsequently the justification of nudges to improve the health of the future child will be discussed. Because Libertarian Paternalism, the traditional justificatory theory for nudging, only offers a

justification for nudges that benefit the nudgee, an alternative form of justification is required. As the securing of the future child's health involves the prevention of harm, the Harm Principle will be put forward as a justification. Furthermore, not only should harm be prevented. The good, in this context the future child's health, should also be promoted. This duty to promote the good is based on the principle of beneficence. Thaler and Sunstein, do mention 'Libertarian Benevolence' as a justification of other-regarding nudges(12).¹ We aim to present a fuller account of how beneficence justifies other-regarding nudges.

The distinction between the duty to prevent harm resulting from act or omission and the duty to promote the good is notoriously hard to determine. It is important however, to seriously consider this distinction as the duty to prevent of harm is thought to offer necessary and sufficient justification to introduce preventive policy whereas the duty to promote the good does not. As this distinction of duties is based on what we can reasonably expect from others, we conclude by discussing the importance of expectations when assessing whether an act counts as doing harm or failing to promote the good.

From unborn to adult, the development of disease

Despite the fact that many risk factors for chronic diseases such as cardiovascular diseases, cancers, chronic respiratory diseases and diabetes, are to a great extent avoidable, the prevalence of chronic diseases has reached pandemic proportions.(13) Many public health interventions are traditionally introduced in the second half of life because it is assumed that during this period the risk of developing chronic diseases is greatest.(14) This approach however, has had limited success because it leaves the early origins of chronic diseases, unaddressed. Research shows that the development of the unborn is an important determinant for the risk to develop chronic diseases later in life. (15, 16) An impaired fetal development, which is for example associated with a mother's poor diet, smoking, alcohol consumption or sedentary lifestyle in the period surrounding pregnancy, leaves biological traces on the newborn, putting him at higher risk to develop chronic diseases later in life.

The field of epigenetics elucidates the pathways through which social disadvantages become biologically impinged.(17) In tandem, these social and biological traces increase the risk of chronic diseases later in life.(17) This is why the offering of adequate

<> The difference between benevolence and beneficence is irrelevant for our discussion so for the sake of clarity we will only use beneficence.

pregnancy-related care and the education and empowerment of mothers-to-be is important. We argue in favor of a fair opportunity for mothers-to-be, to make choices which will benefit their own and their future child's health. Because of their non-coercive character, nudges aimed at promoting healthy maternal choice behavior in the period surrounding pregnancy could be considered. In the next section we will examine the moral justification for using these other-regarding nudges.

Beneficence to promote the good, the Harm Principle to prevent harm

A nudge is an intervention that benefits from people's propensity to favor heuristics over deliberation to steer them towards preset choices. For example, Thaler and Sunstein's well-known cafeteria nudge relies on people's tendency to choose food products that are conveniently in reach and thus easy to choose.⁽¹²⁾ Libertarian Paternalism is put forward as a justification for nudging. In short, a Libertarian Paternalistic nudge encourages people to choose for their own good in their own eyes. The justification of nudges has been discussed extensively because of their alleged potential to manipulate, infantilize and nanny the targeted nudgees.^(18, 19) These concerns also affect the justification of other-regarding nudges. A distinction should be made here between the aim of the nudge, for example helping individuals to eat healthy, and the nudging method which benefits from individual's propensity to make heuristic decisions. We will put forward beneficence and the harm principle as ways to justify other-regarding nudges. The rest of the article will address whether these two principles adequately justify the aims of other-regarding nudges. As regards the method, the justifiability of relying on heuristics is a concern that is not limited to other-regarding nudges, but to nudges in general. If one finds the use of heuristics acceptable, provided that the aim of a nudge is justified, then the use of other-regarding nudges is equally acceptable and vice versa. This is however a matter we cannot settle here. Still, in our view, an assessment of the steering character of the other-regarding nudge (for example does resisting the preset choice involve strenuous effort or high costs) is a pragmatic way to determine the justifiability of the nudging-method. For the rest of this article we will assume that unless the assessment of an other-regarding nudge proves otherwise, the nudging-method is justified.

Regarding other-regarding nudges, one example Thaler and Sunstein discuss is a nudge aimed at increasing the availability of organs.⁽²⁰⁾ This nudge does not benefit the donors, but individuals who need the donor's organs. In this case Libertarian Benevolence is put forward as justification. This shift from paternalism to beneficence represents the shift from self-regarding to other-regarding benefits.

Why then would it be justified to nudge someone for the benefit of another? In the case of organ donation, the fact that the availability of this valuable good fully depends on the willingness of others to donate, provides at least a strong reason to encourage people to become organ donors. Whether a nudge is appropriate to achieve this encouragement depends on the character of the nudge, for example, whether it sufficiently respects the autonomy of the potential donors.

This dependency on others to promote a good also holds for the health of the future child. The securing and promotion of the health of the future child depends to a certain extent on the choice behavior of the mother. Notwithstanding the fact that maternal obligations are in no way comparable to the beneficent act of donating one's organs, both cases demonstrate that the availability of certain valuable goods depends on the willingness of others to provide them. In these cases, an appeal to beneficence provides strong reasons to use other-regarding nudges that aim to promote the good (OG) In the section "beneficence as justification" we will argue that these strong reasons alone provide necessary but insufficient justification for OG.

There are arguably stronger reasons to prevent harm than to promote the good. Therefore, the well-known Harm Principle can be used to justify other-regarding nudges that aim to prevent harm (OH). We will present the justification of OH based on the Harm Principle in the following section.

The Harm Principle as justification

It is widely accepted that governments have the duty as well as the authority to protect and promote the population's health.⁽²¹⁾ The Harm Principle offers a justification for the authority to prevent harm to the population's health. In *On Liberty* John Stuart Mill argues that "The only purpose for which power can rightfully be exercised over any member of a civilized community, against his will, to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant."⁽²²⁾ Joel Feinberg argues that liberty-limiting interventions aimed at preventing harm to others should be both effective and as less intrusive as possible.⁽²³⁾ The ideas of Mill and Feinberg combined offer a basis for identifying the threshold for justified government interventions. In

2 There are two ways an unborn can be harmed. A pregnant woman could *do* harm, for example by taking drugs when she is pregnant. She could also *allow* harm to happen, for example, in the case she is diabetic but doesn't seek care to control her blood sugar. We will follow Feinberg in assuming that the Harm Principle applies to harms brought about both by act (harm done) and omission (failure to prevent harm).

our case, this entails that maternal decisions should be respected by the government except when a decision of a mother places the future child at substantial risk of serious harm. Only then, the most effective and least intrusive interventions are justified.

Regarding OH, the justification based on the Harm Principle raises a serious concern. By definition nudges are not intended to be intrusive or to limit liberty. The Harm Principle justifies far more intrusive interventions than the mere steering character of a nudge. The concern about disproportional intrusiveness however is not a matter of justification, but one of adequacy. For example, if it is indisputably clear that maternal cocaine abuse during pregnancy harms the fetus, a hypothetical cocaine cessation-nudge, which does not block the use of cocaine, is not the adequate intervention to prevent harm. If in this case the only guiding moral principle for introducing an intervention would be the Harm Principle, a far more intrusive intervention would not only be justified but also warranted.

The softer side of harm

In many cases however, patterns of behavior rather than isolated choices cause disease. For example, women are well advised to abstain from drinking alcohol during pregnancy or when trying to conceive. However, it isn't this one and only glass of wine but a pattern of drinking that leads to faltered fetal development. The difference between an isolated choice and a pattern of behavior is, from a moral point of view, important. The Harm Principle offers a prima facie justification to prohibit alcohol and enforce treatment in the cases of pregnant women with a severe alcohol addiction.⁽²⁴⁾ These interventions however, seem too extreme in the case of a pregnant woman who at times drinks a glass of alcohol. This is not new; it is a repetition of Feinberg's articulation of the Harm Principle. What is new though is that the concepts of proportionality and subsidiarity dovetail nicely with nonintrusive interventions that help the majority of mothers who live relatively healthy lives but who would profit from encouragement to prevent harm to their future children. For example, a nudge that encourages the prevention of drinking an occasional glass of wine is far more appropriate than a legal prohibition of alcohol for women trying to conceive. A nudge that incentivizes smoking cessation in the period surrounding pregnancy rather than a blanket prohibition of smoking, isn't intrusive and it has promising chances to work.⁽²⁵⁾ An E-health nudge that generates a personal risk profile can encourage and empower women to adequately prepare for pregnancy. ⁽²⁶⁾ Therefore, in our view, OH are justified when the causes of harm viewed separately are morally wrong but not to the extent that they

justify and warrant coercive interventions. In these cases, the Harm Principle offers necessary and sufficient justification for OH.

Beneficence as justification

We have argued that the availability of certain valuable even life-saving goods, such as organs and a healthy prenatal environment for the fetus, depends on the willingness of others to provide them. This dependency on others to attain a valuable good provides strong reasons to encourage individuals to provide these goods by introducing OG. In addition, in some cases, like ours in which we aim to improve the health of the future child by altering the choice-behavior of the mother, it may be argued that the mother has an interest in benefiting her future child. That is, there are stronger reasons for introducing OG when the nudgee has an interest in benefiting the other even if she is not the primary beneficiary of the nudge.

But does the fact that we are dealing with (i) valuable goods whose (ii) availability depends on the willingness of others to provide them and (iii) these others have an interest in providing these goods, provide necessary and sufficient justification for OG?

The noncoercive character of the nudge meshes well with the imperfect (deontological) or moderate (consequentialist) duty to promote the good. The consequentialist and deontological approach to beneficence share the idea that beneficence, contrary to the Harm Principle, isn't an overriding principle.⁽²⁷⁻³⁰⁾ That is, there are (prima facie) never good reasons to harm someone whereas there can be good reasons not to promote someone else's good. Therefore, beneficence alone offers a necessary but not sufficient justification for OG. Compelling reasons not to promote the good can trump reasons to promote the good. The best-known constraint on the demands of beneficence is overdemandingness. This refers to the unreasonable duty to "give till it hurts".⁽²⁹⁾ Over-demandingness however does not disqualify beneficence as a justification because of the non-coercive nature of nudges; when being nudged, no one is required to give till it hurts. For example, an organ donation nudge does neither oblige nor pressure anyone to donate his or her organs. However, there may be other reasons besides over-demandingness that trump the reasons to promote the good.

Take the following example: it is hard for women to combine a high-powered career and children. Suppose that a government introduces as a 2-year pilot an egg-freezing

nudge to stimulate this combination.³ The government offers companies a financial incentive to stimulate the offering of egg-freezing. This incentive is meant to cover part of the costs of egg freezing. For example, the government pays half and the employer and employee pay the other half. This makes it easier for companies to offer egg-freezing to their employees so that they can choose to become pregnant when they are ready for motherhood. Let's also assume that the intention of the government is to promote the good. The nudge is really meant to offer women a better chance at having a career and children. After two years the number of women freezing their eggs has gone up but less women are working part-time and compared to two years ago, relatively more young women without children are hired than young women with children. In this case, the principle of beneficence offers a necessary but not a sufficient justification. The government nudges companies with (the governmental interpretation of) the good of women in mind. This satisfies the criterion of necessity. However, the reproductive autonomy of the employees could be limited rather than promoted. As it is now, a woman's egg freezing preferences (if she has any in the first place) are her own and she is required neither to choose nor to make her reasons for any decision explicit. With the introduction of this nudge the option of keeping her preferences to herself is lost. Even if she ignores the option, she still *chooses* not to freeze her eggs. In this case –not choosing– is a meaningful option that deserves to be protected, first and for all by the government. In addition, and from a more practical point of view, the evaluation of this nudge reveals detrimental side effects which are: a pressure to postpone pregnancy, less flexible hours for young parents and less career opportunities for young mothers. These concerns show that beneficence is necessary but insufficient as a justification for this OG. This is, of course a fictive example that is only meant to show that ample prudence is required when introducing OG.

The murky waters of preventing harm and promoting the good

We have argued that the Harm Principle offers necessary and sufficient justification for OH and that beneficence offers necessary but not sufficient justification for OG. Thus it is important to determine whether an other-regarding nudge is aimed at preventing harm or at promoting the good.

In theory, a nudge that helps women trying to conceive to start the timely use of folic acid supplementation is easier to justify than a nudge to help women trying to conceive

3 This example is inspired on the controversies surrounding Apple and Facebook's recent offering of egg-freezing to their female employees

to optimize their diet. The former nudge aims at preventing harm whereas the latter aims at optimizing a good. Unfortunately, the murky waters of everyday practice often resist this neat theoretical distinction. It is all but clear where prevention of harm ends and where the promotion of good begins.

Take folic acid supplementation again as an example. Let's consider the case of Amy who is trying to conceive but doesn't use supplementation because she is unaware of its effects on fetal development. A nudge may be introduced to help Amy to optimize her folic acid intake. For example, bread that is fortified with folic acid can be made easily available for her during the period she is advised to use supplementation. Reducing the chance of neural tube defects becomes as easy as eating a sandwich. Because the nudge is aimed at preventing harm the Harm Principle offers necessary and sufficient justification.

Amy's case however, may also be construed, as one of failing to promote a good. Amy isn't putting her future newborn in a more harmful situation than the newborn would be in the first place, a necessary condition for an action (or omission) to count as harm. What she is 'doing' is failing to provide a good, the good being the benefits of supplementation. In this case the justification of the nudge would be based on the principle of beneficence. When considering the introduction of a nudge this difference, although small, does matter. The moral constraint of causing harm is stronger than the moral obligation to promote the good. There are stronger reasons to introduce a supplementation nudge to prevent harm (decrease the chance of neural tube defect) than to promote a good (increase the chance of no neural tube defect). One way to determine whether we are dealing with a situation of harm or a situation of benefit is by assessing what we may reasonably expect from Amy and why.

It is reasonable to claim that women trying to conceive have some maternal obligations towards their future children. These obligations are very likely to inform us about what we may reasonably expect from Amy. Not fulfilling these obligations could be construed as harm. Binge drinking in the period she is trying to conceive for example, would count as harm. There is also a class of actions (or omissions) which are praiseworthy but not obligatory; supererogatory actions. Not acting in a supererogatory way can be construed as failing to provide a good. Even though not visiting a preconception consultation does not count as harm, a visit would be recommendable and praiseworthy. In order to distinguish between situations of harm and benefit however, a full account of obligations of women trying to conceive is required. Although giving this full account is beyond the scope of this article, the most important requirement this account should satisfy is that the expected benefits for the future child should

justify the burdens put on women trying to conceive. In the case of the fortified bread nudge, the benefit of substantially reducing the risk of a neural tube defect justifies the “burden” of being encouraged to eat fortified bread instead of normal bread. Therefore, we argue that using folic acid supplementation is a moral obligation and we would classify that nudge as OH. Optimizing one’s diet when trying to conceive decreases the chances of disease development of one’s future child. The effect of diet optimization on the health of the future child however isn’t as clear as in the case of folic acid supplementation. In addition, optimizing one’s diet is significantly more burdensome than taking folic acid supplementation or eating a different type of bread. Therefore, it is reasonable to classify diet optimization as beneficence rather than preventing harm. A nudge that encourages women to optimize their diet, such as the earlier mentioned m-Health nudge, would therefore be an OG.

A caveat is that there seem to be a lot of presumptions regarding the duties of mothers (-to-be). How easy and common it is to claim that women should do all they can do to prevent harm to their future children. And how easy and common it is to conflate preventing harm with optimizing health. When the prevention of harm and promotion of good are conflated, everything a mother does that does not *maximize* her child’s health or well-being will count as harm. And harm offers necessary and sufficient justification for a whole ambit of interventions. To make sure that the adequate threshold for harm is safeguarded, a fair assessment of benefits and burdens is warranted

Conclusion

We have argued that OH and OG have a place in the array of interventions aimed at preventing harm to and promoting good health of the future child. The Harm Principle offers necessary and sufficient justification for OH. The principle of beneficence offers necessary but insufficient justification for OG. What is expected from nudges, in this case women trying to conceive, determines whether they are expected to prevent harm or promote the good. Therefore, a fair assessment of these expectations is warranted.

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