

LIBERTY, FAIRNESS, AND THE “CONTRIBUTION MODEL” FOR NONMEDICAL VACCINE EXEMPTION POLICIES: A REPLY TO NAVIN AND LARGENT

1 INTRODUCTION

Although vaccines are safe and effective in preventing significant morbidity and mortality from many infectious diseases, many parents have “conscientious” objections (that is, objections based on philosophical or religious opposition) or other types of objections (for example, based on concerns about vaccines’ safety) to child vaccination (Clarke et al 2017, Dube’ et al 2013). In the US, child vaccination is a requirement for child enrolment in state schools or daycare. At the same time, however, most US states allow nonmedical exemptions from school vaccination mandates on the basis of parents’ personal views about vaccines. Unfortunately, these policies are often unsuccessful in maintaining high vaccination rates. From the 2005-2006 to the 2012-2013 school year, exemption rates doubled in almost every US state that allowed nonmedical exemptions from school mandates. For example, California’s exemption rate increased from 1.3% to 2.8%, and Oregon’s rate from 3.4% to 6.4% (Wang et al 2014). Striking a balance between the societal interest in keeping exemption rates low in order to preserve herd immunity and protection of parents’ liberty proves to be a difficult task.

Navin and Largent (2017) have recently argued in favour of a type of policy that attempts to strike such a balance by permitting non-medical exemptions to childhood vaccination mandates, while at the same time making it burdensome for parents to obtain the exemption. For example, parents might be required to attend immunization education sessions as a condition for obtaining the exemption. Similar proposals have also been sketched, though not described in detail as Navin and Largent have done, by Salmon and Siegel (2001, p. 294), Bester (2015, p. 557) and Clarke and colleagues (Clarke et al 2017, p. 160). Navin and Largent call their proposed policy “Inconvenience”. A policy of this kind has recently been implemented in Michigan, where parents are now required to attend immunization education sessions at local public health departments and to complete an official state application form in order to receive a waiver. According to Navin and Largent, Inconvenience is less ethically problematic than policies that do not allow non-medical exemptions—what they call “Eliminationism”—currently implemented in California, Mississippi and West Virginia. The reason is that allowing burdensome exemptions preserves parents’ liberty and does not harm parents by forcing them to do something they strongly oppose (Navin and Largent 2017, p. 3), yet at the same time can be highly successful in lowering exemption rates (Blank et al., 2013; Omer et al., 2012; Rota et al., 2001). Indeed, the burdensomeness of exemption procedures has been shown to be inversely associated with the proportion of exemption requests (Rota et al 2001; Wang 2014, p. e81), and less burdensome exemption procedures are associated not only with higher exemption rates, but also with higher disease outbreak risk (Wang et al 2014, p. e81). The experience in Michigan has been consistent with these findings: Navin and Largent report that the number of nonmedical exemptions fell by 39% in the year following the introduction of Inconvenience (with a peak of 60% decrease in the Detroit area).

There are other reasons—practical and political—that according to Navin and Largent

make Inconvenience preferable to Eliminationism. For example, some vaccine refusers would rather remove their children from school than have them vaccinated, and this could have significant costs for those children (Navin and Largent 2017, p. 3). Navin and Largent also suggest that Eliminationism is likely to cultivate political polarization regarding vaccination policy by antagonising many Republicans, who support a right to conscientious objection.

We focus here on the *ethical* aspects of the two different policies, i.e. the ethical values that are relevant to deciding between them. Contrary to what Navin and Largent suggest, we argue that it is at least doubtful that Inconvenience, as they have formulated it, is ethically less problematic than Eliminationism. As we shall see, it can be expected that either policy requires an important value to be sacrificed to a significant extent. On the one hand, Eliminationism sacrifices a significant amount of liberty for the sake of a probable gain in fairness. On the other hand, Inconvenience can be expected to sacrifice a significant amount of fairness for the sake of preserving a significant amount of liberty. Therefore, which of the two is ethically preferable depends on the relative moral weight we assign to liberty and to fairness. However, we will suggest that it may be possible to preserve both values while keeping the number of exemptions low. In other words, there might be a way of protecting all the three values of liberty, fairness, and expected utility (in terms of population health). The model we propose is in fact a variant of Inconvenience, but it imposes burdens of a different kind than those advocated by Navin and Largent. We shall call our model “Contribution”. According to our proposal, parents who refuse vaccines for their children should be requested to make a positive contribution towards some valuable public health goal. We have chosen the label “Contribution” to emphasize that what matters is not only that objecting parents are burdened (as was the case with Navin’s and Largent’s proposal), but that they make a positive contribution to some public health good.

In the next section we explain how Inconvenience, as presented by Navin and Largent, can be unfair. In section 3 we formulate our positive proposal for the adoption of our variant on Inconvenience—namely, Contribution. Finally, in section 4 we address some possible objections to our proposal.

2 VACCINATION AND FAIRNESS

Navin and Largent appeal chiefly to two ethical values—liberty and utility. They think that there are reasons to protect parents’ liberty of conscience with regard to whether to immunize their children. However they acknowledge that liberty must be balanced against another value—utility—which might be promoted by maintaining high immunization rates.

Navin and Largent say little about a third value, *fairness*, except to point out that Inconvenience is preferable to another type of policy—“Prioritizing Religion”—according to which only exemptions based on religious beliefs should be granted. As they correctly say, “it is unfair to prioritize religion [over philosophical objections] in vaccine exemption policies” (Navin and Largent 2017, p. 4). However, there is another respect in which Inconvenience is not fair. Inconvenience fails to fairly *distribute the burdens* entailed by the realisation of herd immunity. Since herd

immunity is a public good in the technical sense that it is non-excludable and non-rivalrous¹ in consumption, it cannot be efficiently produced by a market. Instead, its production depends on the cooperation of a large number of individuals (Dawson 2007). And since (almost) all benefit from it, in part because where herd immunity exists fewer resources need to be directed to care for the sick, it is fair that every member of society makes her contribution to the realisation or the preservation of herd immunity—unless there are significant medical reasons for not being vaccinated, in which case being vaccinated would be supererogatory. Eliminationism, on the other hand, can be expected to result in less unfairness, because it can be expected that, under Eliminationism fewer people will refuse vaccination than under Inconvenience. Therefore, while Eliminationism sacrifices liberty for the sake of an expected reduction of unfairness, Inconvenience can be expected to sacrifice fairness for the sake of liberty.²

Why is fairness—and particularly fairness in the distribution of the burdens entailed by the realisation of herd immunity—an important value that should inform vaccination policies? To explain this, we can refer to an analogy that Navin and Largent themselves put forward when they make the case for a right to be exempted from vaccination mandates. This is the analogy with pacifists who are exempted from conscription when exemption does not undermine national defence. The authors suggest that conscientious objectors to vaccination should receive the same treatment as pacifists when their objection does not threaten public health, e.g. when vaccination rates remain sufficiently high (as is likely to happen in the case of “Inconvenience” policies): if parents who have ethical or religious opposition to vaccines, concerns about the safety of vaccines, and/or commitments to natural lifestyle were forced to vaccinate their children, they would be subject to “unique harms”, comparable to the harms suffered by pacifists if they were forced to enrol in the military (Navin and Largent 2017, p. 3). *Assuming exemption rates remain low*, we have good reasons not to subject parents to such harms in the same way as we have good reasons to exempt pacifists from conscription.

Now, there certainly are many similarities between conscription and vaccination: both are necessary to preserve or realise public goods; both are typically mandated in order to protect societies from significant threats (either infections diseases or external enemies); there are risks associated with both (although the risks are much smaller in the case of vaccination, and there are significant individual benefits in the case of vaccination but arguably none or less significant individual benefits in the case of conscription); and those exempted from both conscription and vaccination would free-ride on the social benefits resulting from other people’s contributions to the public good in question (Salmon and Siegel 2001, p. 292; Clarke et al 2017, pp. 158-159). But if conscription and vaccination are sufficiently similar that they raise similar ethical concerns, this supports the idea that it is unfair to simply exempt people with a

¹ That a good is non-excludable means that it is not possible to exclude people from benefitting from it, or at least that it is very difficult to exclude people; that a good is non-rivalrous means that the fact that a person benefits from it does not reduce the availability of the good for other people

² Navin (2013, pp. 70-75) did argue elsewhere that fairness is a weighty moral reason in favour of mandatory vaccination. Perhaps fairness plays a less prominent role in Navin and Largent (2017) because this article focusses on policies that have already been implemented in the US, none of which makes fairness in the distribution of burdens a priority. We are grateful to an anonymous reviewer for this latter observation.

conscientious objection from providing the respective socially valuable services. Navin and Largent omit to say that pacifists have traditionally been requested to provide commensurate alternative services in order to make up for their failure to contribute to national defence and to make their contribution to the upkeep and preservation of society (Clarke et al 2017, p. 158). The reason for requesting them to provide alternative, commensurate services is, arguably, that if some make their contribution to the upkeep and preservation of society through military service, it is *fair* that others make a contribution to these goods as well. We propose that a similar view holds regarding vaccination; if some make their contribution to public health through vaccination, it is fair that others make a contribution to this good as well.

Because of this, it is at least doubtful that Inconvenience is ethically preferable to Eliminationism: the latter has an ethical cost in terms of liberty, but since the former will probably allow more people to avoid making any contribution to public health, it has an ethical cost in terms of fairness.³ Thus, which model is ethically preferable depends on the relative weight of the values of fairness and of liberty. If we think that fairness counts as much as or even more than liberty, then Eliminationism is as ethically acceptable as, or even more acceptable than, Inconvenience. From the point of view of fairness, it is ethically preferable that everyone makes their contribution to maintaining high vaccination rates.

But is there a way to preserve both liberty and fairness and at the same time keep vaccination rates high? In the next section we propose a model—a variant of Inconvenience—that we think successfully strikes a balance between liberty, fairness, and expected utility.

3 A REFINEMENT OF THE INCONVENIENCE MODEL: THE CONTRIBUTION MODEL

One way of striking a balance between the three values of liberty, expected utility, and fairness would be to adhere to the model of conscientious objection to conscription, i.e. to require those who are granted an exemption to make an alternative contribution to public health that is commensurate to child vaccination, i.e. that entails a roughly equal public benefit. Such a proposal constitutes a variant, or a refinement, of the Inconvenience model proposed by Navin and Largent, rather than an alternative to it: on our model, the type of inconveniences that conscientious objectors would be subject to would involve making an alternative contribution to some public health good, and a contribution that is commensurate to that made by vaccination. This type of policy, henceforth “Contribution”, would still protect a certain degree of liberty not to vaccinate one’s children, because parents would be free to choose whether to vaccinate their children or to make an alternative contribution. Contribution would also generally be at least as effective as Inconvenience, considering that the alternative service, by burdening objecting

³ It is worth noting that there is another kind of unfairness involved in Inconvenience and Contribution. As Navin writes elsewhere, “laws that require parents seeking exemptions to complete burdensome tasks may shift the burden of creating and maintaining herd immunity further onto the backs of the worst-off members of society” (Navin 2015, 12). This is because many disadvantaged people may lack the time or transportation to bear the burdens of receiving exemptions. We are grateful to an anonymous reviewer for drawing our attention to this point.

parents, would probably render the exemption at least as burdensome as in the Inconvenience model, and perhaps even more burdensome, if, as we suggest below, parents were requested to either give money or give up time to produce some public health good. Finally, Contribution would be fair in that it would force everybody to make their contribution to public health goods, either through vaccination or through commensurate alternative means.

What type of alternative contribution could objecting parents be required to provide? Clarke et al (2017, p. 161) have proposed the introduction of a tax for conscientious objectors to vaccination, and have suggested that the tax should be proportionate to the risk of infecting others posed by the non-vaccinated and to the magnitude of the harm entailed by the infectious diseases for which parents decide not to vaccinate their children. But presented in this way, the tax is meant to be a “penalty” (Clarke et al 2017, p. 161) for one’s failure to contribute to herd immunity, rather than a way of making a contribution to public health which is roughly equivalent to vaccination. In order for the contribution in the form of tax to be a commensurate alternative to vaccinating one’s children, the revenue from the tax should be used to provide a public health benefit which is roughly equivalent to vaccination, for example to support research to find effective cures for the disease in question or to develop vaccines for threatening infectious disease.

There might be other ways, involving non-financial contributions, in which conscientious objectors could make up for their failure to make their fair contribution to a public good like herd immunity, and which are not limited to the type of inconvenience advocated by Navin and Largent. In particular, as we mentioned above, they could be required to give up time to produce some public health good; this might include, for instance, preparing healthy school meals, or engaging in fund-raising activities for charities seeking to develop cures for the infectious disease in question, or perhaps another equivalently threatening disease. The point we want to emphasize is that those refusing vaccination for their children should not only face burdens, such as attending immunization education sessions, as advocated by Navin and Largent, but they should also at the same time make a positive contribution to a public health benefit which is roughly equivalent to the benefit of vaccination.

One might observe that, at least in some cases, the type of inconvenience advocated by Navin and Largent already fulfils this function. Presumably, part of the reason for requiring objecting parents to attend information sessions is to convince them to vaccinate their children. If at least some parents change their mind after having attended the session, this could contribute to a public health benefit through increasing immunization rates. However, some people have deeply held beliefs and moral views about vaccination that are unlikely to be changed by attending information sessions. In particular, parents with religious or moral objections to vaccination (Dube’ et al 2013, p. 1770), as opposed to objections based on concerns for the safety or effectiveness of vaccines, are unlikely to change their mind simply by acquiring more information about vaccines, because it is not lack of information about vaccines that explains their objections. According to our argument, it is fair that also these people make a commensurate contribution to public health so as to make up for their failure to contribute to herd immunity.

4 ADDRESSING SOME OBJECTIONS

Admittedly, our proposal has some limitations, which might at least in part explain why Contribution has not been implemented or seriously considered so far. Although *ethically* preferable to the alternatives, there might be *practical* and *political* difficulties in implementing a policy like Contribution. As for the former, it might be difficult to establish exactly what type of contribution is proportionate to the failure to vaccinate one's children for any specific disease and to the relative risk of contagion. The harm or the risk of harm created by any single non-vaccination is difficult, perhaps impossible, to quantify, as is the benefit brought about through the contribution that is an alternative to vaccination. For these reasons among others, it is not clear what kind of contribution could be commensurate to vaccine refusal.

As for the political difficulties, people who support conscientious objection to vaccination are unlikely to welcome Contribution: they might see the contribution requested of parents refusing vaccination for their children as an unacceptable form of punishment for their vaccine refusal. Therefore, the Contribution model might engender the same type of political polarization that, as Navin and Largent explain, characterizes Eliminationism. Addressing in full these types of practical and political considerations is beyond the scope of this paper, which focuses merely on the *ethical* aspects of the different policies analysed, i.e. on the ethical values that these policies promote or sacrifice. We will therefore only hint at the reasons why we think that neither difficulty represents an insurmountable obstacle to the implementation of the Contribution model.

As for practical difficulties, it is not necessary that the type of contribution requested of the non-vaccinators *exactly* counterbalances the failure to vaccinate one's children and the risk of contagion that such failure generates. Therefore, it is not necessary to quantify the benefit brought about by the alternative contribution and the expected harm of non-vaccination. After all, it is also very difficult to establish whether the contribution that conscientious objectors to the military service are typically requested to make is commensurate to their failure to contribute to their state's upkeep through the military service. What matters in both cases is that conscientious objections make an alternative contribution that *in some roughly comparable way and to some roughly comparable degree* benefits society.

As for political polarization, it is difficult to see how any type of policy on vaccination could not entail some degree of it. Those who are in favour of mandatory vaccination and who are afraid that allowing conscientious objection would increase the risks of disease outbreaks would probably strongly oppose a policy that makes conscientious objection a cheap option. And as we have seen above, and as Navin and Largent suggest, also eliminating the right to conscientious objection *tout court* would create political polarization between those against Eliminationist policies (such as Republicans in the US) and those in favour of them (such as Democrats in the US). We agree with Navin and Largent that Inconvenience could create less political polarization around vaccination than these two alternatives, because it would preserve individual liberty but would make non-vaccination a costly option—it could thus be seen by both sides as a reasonable compromise. But our Contribution model is just a variant of the Inconvenience model in that it merely proposes an alternative to the type of inconvenience attached to non-vaccination. Accordingly, we should expect

that also Contribution would create less polarization than Eliminationism or than policies that make conscientious objection a cheap option.

Someone might observe that, to the extent that the provision of an alternative service makes non-vaccination in the Contribution model more burdensome than non-vaccination in the case of Inconvenience, people who are against vaccination would probably oppose Contribution more fiercely than they would or do oppose Inconvenience. We have two responses to this objection. First, many people who oppose Eliminationism presumably often do so on libertarian grounds, not because they are opposed to vaccination in itself; accordingly, it is not clear that these people would have any more objection to Contribution than to Inconvenience. Second, even assuming that Contribution would create more political polarization than Inconvenience, it is doubtful that political polarization is by itself a sufficient reason against implementing a certain policy, although it certainly is a *pro-tanto* reason. Many policies are unpopular among some people or some circles but nonetheless are enforced in order to protect the public good, such as taxes on tobacco or on alcohol. The Contribution model might be unpopular in certain circles, but if it is a fair way of promoting public health, then the political *pro-tanto* reason against its implementation might not be a strong enough reason.

REFERENCES

- Blank, Nina et al (2013), Exempting schoolchildren from immunizations: states with few barriers had highest rates of nonmedical exemptions, *Health Affairs* 32, 7: 1282-1290
- CDC 2016, *Measles cases and outbreaks*, at <http://www.cdc.gov/measles/cases-outbreaks.html>, last access 13 Jun 2017
- Clarke, S. et al (2017). Conscientious objection to vaccination. *Bioethics*, 31,3: 155-161
- Dawson, Angus (2007), Herd protection as a public good: vaccination and our obligations to others, in Dawson, A and M. Verweij (eds), *Ethics, Prevention, and Public Health*, Clarendon Press: 160-178
- Dube', Eve et al (2013). Vaccine hesitancy. An overview, *Human Vaccines and Immunotherapeutics*, 9, 8: 1763-1773
- Navin, Mark (2013). Resisting moral permissiveness about vaccine refusal, *Public Affairs Quarterly*, 27, 1: 69-85
- Navin, Mark (2015). Prioritizing religion in vaccine exemption policies. Paper prepared for Bowling Green Workshop in Applied Ethics and Public Policy, "The Scope of Religious Exemptions," April 17-18, 2015. Available at <https://www.bgsu.edu/content/dam/BGSU/college-of-arts-and-sciences/philosophy/documents/conferences/2015%20Religious%20Exemptions/Navin.pdf> (last access 23 Jun 2017)
- Navin, Mark and Mark Largent (2017). Improving nonmedical vaccine exemption policies: three case studies. *Public Health Ethics*, doi: 10.1093/phe/phw047
- Omer, S. B., et al (2012) Vaccination Policies and Rates of Exemption from Immunization, 2005–2011. *New England Journal of Medicine*, 367, 1170–1171
- Rota, J.S. et al (2001), Processes for obtaining nonmedical exemption to state immunization laws, *American Journal of Public Health*, 91, 4: 645-648
- Salmon, D.A and Andrew Siegel (2001), Religious and philosophical exemptions from vaccination requirements and lessons learned from conscientious objectors from conscription, *Public Health Report*, 116: 289-295
- Wang, Eileen et al (2014). Nonmedical exemptions from school immunization requirements: a systematic review, *American Journal of Public Health*, 104, 11: e62-e84