This article has been accepted for publication in *The Journal of Medical Ethics* 2018 following peer review, and the Version of Record can be accessed online at [http://dx.doi.org/10.1136/medethics-2018-104752](http://dx.doi.org/10.1136/medethics-2018-104752%22%20%5Ct%20%22_new)

**LIBERTARIANISM AND COLLECTIVE ACTION**

**IS THERE A LIBERTARIAN CASE FOR MANDATORY VACCINATION?**

**Abstract:**

In his paper ‘A libertarian case for mandatory vaccination’, Jason Brennan argues that even libertarians, who are very averse to coercive measures, should support mandatory vaccination to combat the harmful disease outbreaks that can be caused by non-vaccination. He argues that libertarians should accept the *clean hands principle*, which would justify mandatory vaccination. The principle states that there is a (sometimes enforceable) moral obligation not to participate in collectively harmful activities. Once libertarians accept the principle, they will be compelled to support mandatory vaccination. In my paper, I argue that the cases Brennan uses to justify this principle are disanalogous to the case of non-vaccination, and that they are not compelling to libertarians. The cases Brennan offers can be explained by a libertarian using the *individual sufficiency principle*: which states that if an individual’s action is sufficient to cause harm then there is a (sometimes enforceable) moral obligation not to carry out that action. I argue that this principle is more appropriate to Brennan’s examples, and more appealing to the libertarian, than the *clean hands principle*. In order to get libertarians to accept the *clean hands principle*, I present a modified version of one of Brennan’s cases that is analogous to the case of non-vaccination. Using this case, I argue that whether the *clean hands principle* will justify mandatory vaccination is dependent on whether the herd immunity rate in a given population is approaching a threshold after which a collective risk of harm will be imposed onto others.

**Introduction**

In this short paper I will present a novel challenge[[1]](#footnote-1) to Brennan’s libertarian argument for mandatory vaccination. Firstly, I describe Brennan’s aim. I then explore the key libertarian commitments that make such an aim difficult to achieve, and give a rough idea of the kind of case Brennan needs to make. Secondly, I describe the specific cases he uses to achieve his aim. He tries to use these cases to make libertarians accept the *clean hands principle*, which will allow them to endorse coercion in the case of mandatory vaccination. I argue that these cases do not work, as they are disanalogous to the case of non-vaccination. Due to this disanalogy, libertarians can appeal to the *individual sufficiency principle* in order to explain their intuitions in Brennan’s cases. Lastly, I describe a modified version of one of Brennan’s cases, which is both analogous to the case of non-vaccination, and may motivate libertarians to accept the *clean hands principle*. In examining this case, I will argue that whether or not a libertarian can appeal to the *clean hands principle* in a given case is dependent on whether a threshold is being approached after which a collective action will impose a risk of harm on others.

**1. Making a Libertarian Case for Mandatory Vaccination**

Brennan’s aim is to “argue that…libertarians can and should endorse mandatory, that is, government-enforced, vaccinations.” Libertarians hold that it is unjust to coerce individuals for the common good, and they highly value the autonomy and rights of individuals. If even libertarians can be convinced that governments should enforce mandatory vaccination, this is strong evidence in its favour: it can be recommended even when “the philosophical deck” is stacked against it (Brennan 2016, p. 1).[[2]](#footnote-2)

 As he acknowledges, Brennan’s case is (at least prima facie) a difficult one to make. This is so for two main reasons. Firstly, libertarians, while they do not subscribe to “one uniform political philosophy” (p. 2), share certain core commitments:

(L1) Individuals are primary in normative discussions (p. 2)[[3]](#footnote-3). Only individuals, and not collective entities, are the reference point of moral obligations, and moral relations only exist between individuals (von der Pforden, p. 452). I will call this *normative individualism* (p. 5).

(L2) It is permissible to coerce individuals only to prevent them from wrongly harming others: wrongful harming including, for example, violence or fraud (p. 3). Combined with (L1), (L2) shows that libertarians think it impermissible to justify coercion on the basis of the public good, or the interests of the state or community.

(L3) Governments are bound by the same moral principles as individuals (p. 2[[4]](#footnote-4), see also Huemer 2013)

Taking these commitments to hold for all libertarians, Brennan needs a powerful argument to justify the widespread government coercion needed to enforce mandatory vaccination.

Before proceeding, it is necessary to mention that (L2) has a complication. While some harms, such as direct physical violence, are clearly wrongful for libertarians, there are other kinds of harms that libertarians will accept: for example, emotional harms caused by ‘hate speech’, or negative externalities imposed by a business onto its rivals, even though this may leave the rivals destitute (p. 3). A further complication is with practices that impose the *risk of harm*. As Brennan points out, libertarians need a theory of “acceptable risk” to distinguish between acceptable and unacceptable risk imposition: because many ordinary activities, such as driving cars, impose risks of harm on other people (p. 5). Brennan’s solution is to use Hansson’s theory of acceptable risk: “Exposure of a person to a risk can […] be regarded as acceptable if it is part of an equitable social system of risk-taking that works to her advantage” (Hansson 2011, section 5). Using this theory of acceptable risk, Brennan can explain why ordinary driving is an acceptable imposition of risk on others, but the planting of a bomb that has a 1/10,000 chance of exploding is not: the planting of a probabilistic bomb is not part of an equitable social system of risk-taking. However, there are certain practices that only start imposing risk when a sufficient number of people take part. For example, in Brennan’s example of a probabilistic bomb, a single probabilistic bomber is enough to impose a risk. In this way, placing a single bomb crosses a *threshold* of risk: before the bomb was placed there was no risk of explosion, and after it is placed there is a calculable increase in risk (Glover & Scott-Taggart 1975, pp. 173-174). In the case of one individual not getting vaccinated in a society with sufficient herd immunity, however, no threshold is crossed. In a community that has a sufficient number of people vaccinated to achieve herd immunity, if a single individual chooses not to be vaccinated they do not increase the risk for anybody but themselves (and even this increase in risk is “close to 0”, Fine et al 2011, p. 914).

This consideration leads into the second reason why Brennan’s case is difficult to make: the problem of non-vaccination is a *collective action problem*. As Brennan points out:

It is not literally true that any particular child must be vaccinated to protect that child from disease; rather, what matters is that a sufficiently high enough percentage of the population be vaccinated. (p. 3)

While parents not vaccinating their children can cause harm, in the form of outbreaks of preventable diseases (p. 1), this harm is not attributable to any particular non-vaccinated individual. Rather, the whole group of non-vaccinated people collectively imposes the harm, and any given individual *is neither necessary nor sufficient to cause harm*: it is only when herd immunity drops below a certain level that disease outbreaks start happening. Assuming a fully effective vaccine, a herd immunity rate of 75%, and discrete groups within the population at large, we can see the collective structure of a disease outbreak. *A* is an agent who is voluntarily non-vaccinated, and so contracts an infectious disease. *A* interacts with *B*, *C*, *D*, and *E*, where *E* is also voluntarily non-vaccinated. *E*, unknowingly,becomes infected, and then interacts with *F*, *G*, *H*, and *J*, where *J* is involuntarily non-vaccinated. *J* then becomes infected. In this scenario, *E*’s being non-vaccinated is not sufficient for *E* to infect *J*: it also has to be the case that *A* is non-vaccinated. The same applies for *A*: *A* is not sufficient to infect *J* unless *E* is also non-vaccinated. This is a simplified model, and in reality some vaccines do not completely prevent vaccinated people from transmitting diseases, and individuals within a society do not interact with discrete groups as described above (as such, in reality, particular individuals are neither necessary nor sufficient to transmit diseases, as multiple routes for transmission may exist): these two factors are both taken into account when calculating required herd immunity levels. However, it is still the case that when herd immunity is sufficiently high, an individual becoming non-vaccinated does not create any risk, except a very small risk for that individual (Fine et al 2011).[[5]](#footnote-5) If a sufficient number of individuals are non-vaccinated, a threshold will be passed below which there is insufficient herd immunity. At this point, there is a risk of outbreaks of disease that will harm other individuals (Siegal et al 2009, p. 1584).

As, typically, no single individuals can be directly blamed for the harms caused by non-vaccination, it is very difficult to convince libertarians that individuals can be coerced into mandatory vaccination by the state (p. 3).

Given these two main obstacles, what Brennan needs is an argument that will convince libertarians that coercion of individuals is permissible to prevent a harm that those individuals are *neither necessary nor sufficient* to cause. The *clean hands principle* is supposed to explain why this can be the case, and Brennan offers cases designed to motivate libertarians to accept the principle.

**2. The Clean Hands Principle**

Brennan’s first case is the firing squad case (p. 4):

(FSC) *Firing squad case:* a group of 10 sharpshooters are about to kill an innocent child. They have been trained to shoot in such a way that each shot will hit the child at the same time and each shot would be fatal on its own. You cannot stop the sharpshooters from killing the child. They ask you if you would like to take the 11th shot.

Brennan argues that the FSC gives us the following intuitions:

(i) It is wrong to be the 11th shooter, despite the fact that the child is doomed anyway.

(ii) It is permissible to use coercion to prevent somebody else from being the 11th shooter.

It should be noted that if these intuitions are not plausible then Brennan’s argument stops here. However, let us assume that these intuitions are plausible for the sake of the argument.[[6]](#footnote-6)

Brennan claims that what explains the intuitions in the FSC is the clean hands principle:

(CHP) *Clean hands principle:* there is a (sometimes enforceable) moral obligation not to participate in collectively harmful activity. A collectively harmful activity is defined as “a harmful activity caused by a group or collective, where individual inputs into the harmful action are negligible”.

Once we embrace the CHP, we can apply it to the case of vaccination: if the non-vaccinators collectively impose a serious risk of harm on others, then, according to the CHP, it is permissible to coercively stop them from harming others. The way to stop the collective harm is to vaccinate the non-vaccinators, thus the CHP can motivate mandatory vaccination.

However, the FSC and its variants do not motivate the libertarian to accept mandatory vaccination. There are two related reasons for this: the first is that the FSC is disanalogous to the vaccination case; the second is that the FSC will not motivate libertarians to accept the CHP.

In the FSC, each sharpshooter is *sufficient* to kill the child, but not *necessary* to do so. In the vaccination case, each non-vaccinated person is neither *necessary* nor *sufficient* to cause the harmful effects of non-vaccination. This disanalogy also means that libertarians will be unlikely to subscribe to the CHP in the FSC. In the FSC, each sharpshooter’s action is sufficient to kill the child: and this is why libertarians will condemn the case. The FSC can motivate intuitions (i) and (ii), but libertarians will explain these intuitions with the following principle:

(ISP) *Individual sufficiency principle:* if an individual’s action is sufficient to cause harm, then there is a (sometimes enforceable) moral obligation on that individual to not take the action.

The ISP is clearly nothing new, and the fact that the ISP can be used to explain the intuitions in the FSC is testament to the fact that the FSC is disanalogous to the case of non-vaccination.[[7]](#footnote-7) The ISP fits the FSC better than the CHP due to this disanalogy: given that each shooter is sufficient to kill the child, it is not accurate to say that their individual input is negligible (as it is accurate to say in the case of non-vaccination). The fact that each sharpshooter performed a deliberate action that was sufficient to kill the child will enable the libertarian to attribute blame to each sharpshooter individually: and, given that deliberate actions that are sufficient to kill people qualify as (at least) attempted murder, such actions will justify coercion against each individual. In addition, ISP is also far more theoretically attractive to libertarians than the CHP,[[8]](#footnote-8) as it allows them to maintain their commitment to normative individualism by considering the moral relations in the FSC as existing simply between the innocent child and each individual sharpshooter.

It may be thought that, for a libertarian committed to normative individualism, it is difficult to justify coercion against an action that is *sufficient* but isn’t *necessary* to bring about harm. However, note that this would rule out interference with many harms: A murdering B is *sufficient*, but of course not *necessary* to bring about B’s death (other people can murder him too). So requiring that an action be necessary and sufficient to justify interference for libertarians seems to rule out too many interventions as illegitimate.[[9]](#footnote-9)

 However, the ISP *cannot* be used to motivate libertarians to support mandatory vaccination: as stated above, in the vaccination case, no individual non-vaccinator’s action is sufficient to cause harm.

 An argument against subscribing to the ISP in the FSC is the problem of distributed blameworthiness. In the FSC, each shot will hit the child at the same time, and each shot is sufficient to kill the child. So we will not actually know which shooter’s bullet killed the child. So, if we adopt the ISP, how should we apportion blame? Do we charge all of the shooters with attempted murder only? After all, at least 9 of them tried but failed to kill the child, and the 1 who did kill the child is not identifiable. This is an interesting question, and I do not have an answer.

 However, this problem of how to distribute blameworthiness also occurs if we embrace the CHP. I may be blameworthy for participating in a collectively harmful action, but surely I am not as blameworthy as if I had brought about the same harm all by myself? Here there is still the problem of how to distribute blame.

**3. Modified Cases and Collective Harm Thresholds**

Brennan offers another case when he is discussing whether libertarians should accept the CHP. He suggests that a refusal to adopt the CHP could make libertarians vulnerable to the innovative fascists case (p. 5):

(IFC) *Innovative fascists case:* there is a new fascist, imperialist, warmongering, socialist and paternalistic political party. They say that they will engage in war, censorship, mass murder, and will impose high taxes, economic regulations, and ramp up the war on drugs- things which libertarians hate. However, to avoid libertarian criticism, they will always impose these actions and rules through collective activities: e.g., when shutting down a libertarian website, a team of censors will be trained to shut the site down simultaneously, so the action is overdetermined, as in the FSC.

If libertarians confront the IFC without the CHP, Brennan thinks that the overdetermination of the fascist party’s actions will leave libertarians unable to properly criticise the party’s actions. Overdetermination here is taken to mean that no one individual involved in the action is *necessary* for the action to take place. However, as I argued above, the ISP allows libertarians to condemn overdetermined actions so long as each individual’s action is *sufficient* to cause harm. Therefore, if the IFC is interpreted such that each of the fascist’s actions is *sufficient* to cause some harm (for example) to the libertarian website, then the ISP can be appealed to.

However, one can interpret the IFC such that no single fascist’s action is sufficient to have any effect on the website: instead, each fascist’s action simply makes it incrementally more likely that a threshold will be reached, after which there is a risk of harm. Such an interpretation of the IFC would make it more analogous to the case of non-vaccination, and so it may motivate the libertarian to adopt the CHP. However, this version of the IFC is still not completely analogous to the non-vaccination case. In the IFC, the actions of the fascists are all centrally directed with the purpose of bringing down the libertarian website. This intentionality could be appealed to by a libertarian when condemning the fascist’s actions: perhaps by invoking a principle such as “there is a (sometimes enforceable) moral obligation not to participate any actions that are coordinated with the purpose of causing collective harms.” Such a principle would not allow mandatory vaccination: as anti-vaxxers, for all their flaws, do not refuse vaccination for the purpose of creating outbreaks of disease.

In order to avoid such appeals to intentionality when trying to motivate libertarians to adopt the CHP, the IFC should be further modified so that there is no central authority directing the fascists with the aim of causing a collective harm, and none of the individual fascists have the aim of causing collective harms. Instead, we can imagine a case where there are multiple actors, each of whom enjoy sending harmless parcels of code to other people’s websites. However, when enough of these coders send parcels to a single website, a threshold is crossed after which there is a risk that the website will be harmed. This case avoids the harmful intentionality in Brennan’s original IFC, and none of the individual actors involved are necessary nor sufficient to cause harm or a risk of harm, so it is analogous to the non-vaccination case. Must such a case force the libertarian to accept the CHP? If the libertarian thinks that it would be wrong to be the *n*th coder, then it would seem that the CHP is a principle that can explain their intuition. Perhaps a particularly staunch libertarian could continue to appeal to the ISP by claiming that the fact that each individual coder is acting upon the website without permission is *sufficient* to count as a rights violation: after all, it is not *their* website, so they have no right to act upon it, even if their individual actions are completely ineffectual. The modified IFC could then be condemned using the ISP. However, this is an extension of the ISP that the libertarian should be wary of. If my interacting in any way somebody else’s property, without their permission, counts as a rights violation, then the ISP will become completely prohibitive: for example, I will not be able light a bonfire in my garden, because the smoke may move into your garden, and, even though the smoke is not harmful, I have still acted upon your property without your permission (Sobel 2012). So, when modified correctly, the IFC should motivate the libertarian to adopt the CHP: as this enables them to explain why they would condemn the actors.

However, one consequence of using the CHP in a way the libertarians will accept is that the CHP can only be used once the activity in question has become collectively harmful. If a single actor sends a parcel of code to a website, and their piece of code will do no damage, then it seems that no harm (collective or otherwise) is caused, and therefore the CHP is not motivated. This conclusion should be the same up to the point that the number of pieces of sent code cross a *threshold* where they start imposing the risk of damage to the website: this is because the libertarian can only appeal to the harm or risk of harm imposed on others when justifying coercive measures (L2). When applied to the case of non-vaccination, the CHP recommends that non-vaccinators can be mandatorily vaccinated *if* the herd immunity rate is sufficiently low that the non-vaccinators are collectively imposing the risk of harm. Furthermore, once a sufficient number of non-vaccinators have been vaccinated to restore the required herd immunity rate, the justification provided by the CHP will stop being effective, and the coercive measures should then be stopped.

**Conclusion**

Most of Brennan’s cases will motivate libertarians to accept the ISP, not the CHP. His final case, the IFC, can be modified in such a way that it is both analogous to the case of vaccination and may motivate libertarians to accept the CHP. However, this case also enables us to see the limits of the CHP: it can only be brought into action once a collective harm (or risk of harm) is actually happening. Therefore, when applied to the case of vaccination, the CHP recommends that non-vaccinators can be mandatorily vaccinated *if* the herd immunity rate is approaching the threshold where a collective risk will start to be imposed.

 **References**

1. Bernstein, J. The case against libertarian arguments for compulsory vaccination. *Journal of Medical Ethics* 2017; 43(11):792-796.
2. Brennan, J. A libertarian case for mandatory vaccination. *Journal of Medical Ethics* Published Online First: 11 July 2016. doi: 10.1136/medethics-2016-103486;1-7.
3. Fine, P., Eames, K., & Heymann, D. L. “Herd Immunity”: A Rough Guide. *Clinical Infectious Diseases* 2011; 52(7):911-916.
4. Glover, J., & Scott-Taggart, M. It Makes no Difference Whether or Not I Do It. *Proceedings of the Aristotelian Society, Supplementary Volumes* 1975; 49:171-209.
5. Hansson, S. O. Risk. *The Stanford Encylopedia of Philosophy*. 2011. <https://plato.stanford.edu/entries/risk> (last accessed 15 Jun 2018).
6. Huemer, M. *The Problem of Political Authority*. Palgrave Macmillan UK, 2013.
7. Pforden, D. Five Elements of Normative Ethics – A General Theory of Normative Individualism. *Ethical Theory and Moral Practice* 2012;15:449-471.
8. Siegal, G., Siegal, N., & Bonnie, R. J. An Account of Collective Actions in Public Health. *American Journal of Public Health* 2009; 99(9):1583-1587.
9. Sobel, D. Backing Away from Libertarian Self-Ownership. *Ethics* 2012; 123(1):32-60.
10. Zwolinski, M. Libertarianism. *Internet Encyclopedia of Philosophy*. <http://www.iep.utm.edu/libertar/> (last accessed 15 Jun 2018)
1. For another challenge to Brennan’s argument, see Bernstein 2017. [↑](#footnote-ref-1)
2. From hereon, all simple page numbers are references to Brennan 2016. [↑](#footnote-ref-2)
3. Here Brennan quotes Zwolinski 2017. [↑](#footnote-ref-3)
4. Quoting Zwolinski. [↑](#footnote-ref-4)
5. It could, of course, be the case that a non-vaccinated individual becomes infected, and then chooses to go to a hospital ward full of immunodeficient individuals. In this case, the non-vaccinated individual is certainly sufficient to infect others. However, I am inclined to view such a case as more akin to a poisoning, and therefore easily dealt with by libertarians as a case of wrongful harm: the non-vaccinated individual could be quarantined or vaccinated in this case, as his actions are sufficient to cause harm to other individuals. I thank an anonymous reviewer for pointing this out. [↑](#footnote-ref-5)
6. Brennan presents two further variants of the FSC, the Probabilistic FSC (p. 4) and the Reckless Astronauts Case (p. 5), but as they all have the same form the following argument can proceed with the original FSC alone. [↑](#footnote-ref-6)
7. I thank an anonymous reviewer for pressing me on this point. [↑](#footnote-ref-7)
8. Indeed, I think the ISP is more intuitive to non-Libertarians as well. [↑](#footnote-ref-8)
9. I thank an anonymous reviewer for pressing me on this point. [↑](#footnote-ref-9)