

RESISTING MORAL PERMISSIVENESS ABOUT VACCINE REFUSAL

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Some parents . . . aren't willing to risk the very rare side effects of vaccines, so they choose to skip the shots. Their children benefit from herd immunity (the protection of all the vaccinated kids around them) without risking the vaccines themselves. Is this selfish? Perhaps. But as parents you have to decide. Are you supposed to make decisions that are good for the country as a whole? Or do you base your decisions on what's best for your own child as an individual? Can we fault parents for putting their own child's health ahead of other kids around him? . . . [W]e can't really fault parents who think that vaccines are too risky and decide to put their own kids first. We all put our own children first in most situations.

—Robert W. Sears, *The Vaccine Book*¹

I. INTRODUCTION

If the popularity of his *Vaccine Book* is any indication, many people agree with Dr. Bob Sears² about the morality of vaccine refusal.³ Like Sears, they do not “fault parents” who refuse vaccination out of concern for their children’s well-being; they think morality permits parents to prioritize the interests of their children over the “good of the country as a whole.”⁴ Other writers for a popular audience have also argued that vaccine refusal may be justified by a parental prerogative to prioritize the interests of one’s own children.⁵ Writers for academic audiences have also often characterized the morality of vaccination in terms of an analogous tension between personal (parental) autonomy and (utilitarian) considerations of public health.⁶

For the purposes of this paper, I accept the claim—made by Dr. Bob and others—that refusing (some) routine vaccines promotes children’s interests. Since vaccination carries a non-zero risk of serious adverse side effects,⁷ and since herd immunity largely protects against exposure to the diseases to which the herd is “immune,”⁸ it may seem that abstaining from vaccination against the diseases for which the community possesses herd immunity promotes children’s interests. Importantly, we can arrive at this conclusion without endorsing the falsehoods Dr. Bob and others circulate regarding the frequency, severity, and etiology of vaccines’ adverse side effects.⁹ The fact that vaccines carry a risk of

harm, in addition to the fact that herd immunity grants protection to those who are not vaccinated, may seem sufficient for endorsing the plausibility of rational vaccine refusal. To be clear, I am not claiming that vaccine refusal is prudent.¹⁰ Furthermore, if vaccine refusal is, in fact, imprudent, then the tension Sears and others identify between the interests of children and the interests of society-at-large is merely apparent. However, for the purposes of this paper, I accept the existence of this (supposed) tension.

What I reject in this paper is the claim—implicit in much of the apologetics of vaccine refusal—that the only (weighty) moral reason in favor of vaccination is a (positive, abstract) duty to promote public health. Recall that Dr. Bob (among others) claims that vaccine refusal is justified by a parental prerogative to prioritize the interests of one’s child over the good of society. However, the moral permissibility of vaccine refusal follows from this parental prerogative only if the only (weighty) moral reason in favor of vaccination is that vaccination is a means for promoting the interests of others.¹¹ But this is not the only weighty moral reason in favor of vaccination. Closer attention to the morally relevant features of vaccination choices reveals two additional weighty moral reasons in favor of routine vaccination. First, the fact that one’s fellow members of society have, through their collective efforts, created a public good—“herd immunity”—generates a reason to contribute to these efforts by becoming vaccinated. That is, considerations of fairness incline in favor of vaccination. Second, the fact that some persons must depend upon herd immunity because they are too young, too old, or too sick to become vaccinated generates a reason to show special concern for such persons. Concern for *vulnerable persons* also inclines in favor of vaccination. Importantly, considerations of *fairness* and concern for the vulnerable are reasons for vaccination that are distinct from the reason which is generated by the mere fact that vaccination is, as Dr. Bob puts it, “good for the country as a whole.”

Advocates of routine childhood vaccination rightly criticize the falsehoods vaccine refusers circulate about the safety and efficacy of vaccines. My hope is that advocates of routine childhood vaccination will also come to criticize the falsehoods vaccine refusers circulate about the morally relevant features of vaccine-related decisions. Of course, there can be reasonable disagreement about the demands of morality. However, it should be clear enough that Sears and others offer an inadequate account of the moral terrain surrounding vaccine choices; it is worth pointing this out.

2. FAIRNESS AND FREE-RIDING ON HERD IMMUNITY

One moral reason in favor of vaccination is that becoming vaccinated is a means by which one can make a fair contribution toward herd immunity. To restate this point in a different way: one moral reason not to refuse routine vaccination is to avoid unfairly free-riding upon a public good that others have created.¹²

Importantly, considerations of fairness are distinct from the considerations of beneficence that Dr. Bob and others seem to think exhaust the moral reasons for vaccinating. It is one thing to give greater weight to the interests of one's children than one gives to the interests of others. As Dr. Bob mentions, such prioritization might be consistent with a principle of moderate parental partiality. However, it is something else entirely to make unfair use of the efforts of others in order to advance one's own (children's) interests. A principle of parental partiality that authorizes parents to give greater weight to the interests of their children than they give to the interests of strangers may not authorize parents to generate benefits for their children from the unfair use of social goods others have created.

2.1. Herd Immunity as a Public Good

We generally think that we ought to pay for goods we request, but that we need not pay for unsolicited goods. For example, while I ought to pay for books that I order online, I do not have to pay for books that someone else ordered and had shipped to my house.¹³ My conviction that I am morally free not to contribute toward the cost of unsolicited goods is undisturbed even when unsolicited goods emerge within the context of existing relationships. For example, if my neighbor decides to mow my lawn unprompted by me, his gift does not generate a moral duty to contribute toward the maintenance of his lawn mower. The fact that we are friends gives rise to associative duties (which may include a duty of mutual aid), but these duties are not grounded in the mere fact that he has performed unbidden favors.

Why isn't herd immunity like a gifted book or a mowed lawn? Persons may seem as little obligated to contribute to herd immunity as they are obligated to contribute to schemes for the public distribution of books or the neighborly distribution of lawn-mowing services. As in the case of these other goods, one does not request the benefits of herd immunity. Instead, once a sufficient percentage of the population possesses individual immunity (e.g., through vaccination), all members of the community will enjoy its benefits. They will live in a community in which it is unlikely that they will be exposed to the diseases against which a sufficiently large percentage of the population is individually immune.¹⁴ Also, as a result of the community's protection, its members are unlikely to be subjected to the various social and economic hardships that mass disease outbreaks occasion (e.g., extended quarantine). However, if members of societies that possess herd immunity have not chosen to receive the benefits of herd immunity, and if they have not agreed to contribute to the production and maintenance of herd immunity, why should we think that they have a duty to support herd immunity?

The short answer is that herd immunity is not a "private good," like a book or a mowed lawn. It is a "public good," like national security or a clean environment. And, one may have a duty to contribute to the cooperative schemes that generate public goods, even if one does not voluntarily consent to participation in

these cooperative schemes. Admittedly, there are contentious debates about what makes something a public good, and I have no intention of attempting to resolve these debates in this paper.¹⁵ However, I hope to give good reason for thinking that there is a duty of fairness to contribute to herd immunity by showing that herd immunity meets many of the conditions that public goods are supposed to satisfy.

To state it as simply as possible: A good is public when it cannot be private. First, it is (nearly) impossible to prevent people (or for people to prevent themselves) from making use of a public good. For example, there is no feasible scheme by which citizens of the United States could be prevented (or could prevent themselves) from enjoying the benefits of national security or clean air. In contrast, there are possible (and existing) schemes for controlling access to hamburgers and houses. Air and security are, therefore, public in a way that hamburgers and houses are not. Herd immunity is more like air and security in this way than it is like hamburgers and houses. You cannot prevent persons (and persons cannot prevent themselves) from making use of the community's protection against disease transmission. Second, a public good has no marginal costs. The costs of one person enjoying a public good are the same as the costs of all persons enjoying it. For example, the price for one member of society to enjoy the benefits of national security is the same as the price for all members of society to enjoy national security. Once you have national security for one, you have it for all. In contrast, it costs more money for more people to eat hamburgers in this respect. Herd immunity is more like national security than hamburgers. The cost of one person enjoying herd immunity is the same as the cost of all members of society enjoying it. Third, and relatedly, a public good has no marginal benefits. The benefits to the first person who enjoys the good are the same as the benefits to the last person who enjoys the good. Again, this is a feature that herd immunity shares with clean water and national security. And this is a feature of herd immunity that is not possessed by goods like hamburgers and houses.

The special nature of public goods means that ideas about the fair production and consumption of private goods do not (indeed, cannot) apply to them. A fair distribution of the costs of a public good cannot depend upon voluntary contracts, since one cannot voluntarily accept or refuse a public good. The fair cost of these goods cannot be determined by reference to the marginal costs of production or the marginal benefits of consumption, because there are no marginal costs, and because the benefits are the same to all. Instead, a public good is a product of social cooperation, and the responsibility for creating and maintaining it falls to the members of the community. The members of a community, therefore, have a duty to establish fair schemes by which persons may contribute to the public good that social cooperation generates.¹⁶ And, when a fair scheme exists for contributing to public goods, the members of the community have a duty to contribute to it.

I will not attempt to identify necessary and sufficient conditions for fair contribution schemes for public goods. Indeed, this is one of the central topics of political philosophy. However, it may be worthwhile to make two general points about fair contribution schemes in relation to questions about vaccination and herd immunity. First, a fair contribution scheme imposes only a reasonable cost on the individual. Since the risks of vaccine-complications are very low for most people, vaccination likely imposes reasonable costs upon most people. Therefore, it counts in favor of the claim that vaccination is a fair scheme by which to contribute to herd immunity that the costs of vaccination are generally low. Second, a fair contribution scheme imposes equitable costs among the participants in the scheme. The costs of vaccination (e.g., a low risk of complications) are the same for almost all persons. Therefore, it counts in favor of the claim that vaccination is a fair scheme by which to contribute to herd immunity that the costs of vaccination are generally equitably spread. As I discuss below, it follows from this characterization of a fair contribution scheme that vaccination may not be a fair contribution scheme for a person who is at elevated risk of vaccine-complications.¹⁷ Such a person may not have a duty of fairness to become vaccinated.

2.2. *Free-Riding on Herd Immunity*

A person who does not contribute to a fair cooperative scheme for the production of a valuable public good takes unfair advantage of the public good that her fellows have created. She is a free-rider.¹⁸ A free-rider not only prioritizes her own interests, but she treats her fellows with insufficient impartiality in her pursuit of her own interests. She uses them—and the public good they have created—without making fair contribution.¹⁹

At least some non-vaccinators (and their allies) are explicit about the fact that they are free-riders. Even worse, some realize that they can free-ride only as long as most other people continue to vaccinate. For example, Dr. Bob Sears says that he tells his (non-vaccinating) patients “not to share their fears with their neighbors, because if too many people avoid the MMR [measles, mumps, and rubella vaccine], we’ll likely see the disease increase significantly.”²⁰ Such free-riding is immoral, but not (primarily) because (as Dr. Bob seems to think) it demonstrates a failure to *promote* the interests of the broader community. It is immoral because it demonstrates a willingness to make *unfair use* of the contributions others have made to social cooperation.

2.3. *Free-Riding on the Disadvantaged*

I have argued that free-riding is intrinsically unfair. In practice, free-riding on herd immunity is also often unfair in another way: it delivers a benefit to otherwise advantaged social groups at a cost to members of otherwise disadvantaged social groups. First, free-riding on herd immunity is often more available to members of privileged social groups, and less available to members of disadvantaged

groups.²¹ Members of disadvantaged groups may lack the knowledge, money, time, or confidence necessary to refuse routine childhood vaccines or to negotiate alternate vaccination schedules. Such persons may find it especially difficult to resist authoritarian physician-patient relationships or to insist upon modifications to standard vaccination protocols.²² Furthermore, members of disadvantaged groups may depend upon the public health system and, consequently, they may lack access to the sorts of pediatricians (or the sorts of pediatric practices) who are willing (or able) to customize treatments. Because of the ways in which members of disadvantaged groups engage with the health care system, they are very unlikely to become free-riders on herd immunity.

Second, free-riding on herd immunity is available to members of privileged social groups *because* it is less available to members of disadvantaged groups. Herd immunity is generally consistent with only small numbers of free-riders. Therefore, free-riding is not only an unearned advantage primarily enjoyed by otherwise privileged persons. It is also an unearned advantage that makes unfair use of the socially cooperative labor of members of otherwise socially disadvantaged groups (among others). In this way, free-riding on herd immunity compounds existing injustices rooted in social inequalities.

The work of Dr. Bob Sears illustrates both of these aspects of what we might call the “privilege of vaccine refusal.” Dr. Bob is the son of Dr. Bill Sears (who is the author of multiple best-selling books), and he is the brother of Jim Sears (host of the CBS television show *The Doctors*). Dr. Bob practices pediatrics at his family’s private clinic in Capistrano Beach, an especially wealthy community of Orange County, California. Dr. Bob’s notable achievement is an alternative “slowed-down” vaccine schedule.²³ This schedule is a template for parents to use when selecting which vaccines their children will refuse and how to delay the vaccines their children will receive. Sears admits that his schedule will likely be useful only to the privileged *and* that the limited availability of his schedule is a good thing, since its widespread implementation would likely undermine herd immunity:

This schedule would probably drive public health officials crazy. In large cities, where some families don’t have good access to health care (whether from lack of insurance, language barriers, or financial reasons), it’s already a challenge to get kids fully vaccinated. If we double the number of visits needed, we can forget the goal of achieving high vaccination levels in some areas.

Yet, ultimately, the choice is yours if you think the precautions are worth it.²⁴

Importantly, the “choice” to forgo or customize vaccination is “yours” only if you are privileged. If the poor asked for this special treatment from the public health system, they would likely be denied, since public health officials lack the resources to create and manage customized vaccination schedules. However, on Sears’s view, that’s a good thing, since restricting vaccine refusal and customization to a privileged few makes it possible for society to achieve high rates of

vaccination and herd immunity. Sears's comments illustrate both of the ways in which free-riding intersects with existing forms of social inequality. First, on his view, the ability to refuse routine childhood vaccines (or to otherwise deviate from mainstream treatments) is likely available only to members of society who already enjoy economic, social, and intellectual advantages. Second, the privilege of (relatively) risk-free vaccine customization (and refusal) is available to these few members of society only because members of disadvantaged groups have received routine vaccines. Those who customize or refuse aspects of childhood vaccination not only make unfair use of a social good others have created. They make unfair use of the social cooperation of otherwise disadvantaged members of society. They voluntarily participate in the expansion of unjust social inequalities.

3. OBJECTIONS TO THE CHARGE OF FREE-RIDING

There may appear to be two reasons for resisting the conclusion that vaccine refusers take unfair advantage of the contributions others have made to herd immunity. First, one may deny the moral worth of the contributions vaccinated persons have made to herd immunity, since most people have primarily self-interested reasons for becoming vaccinated. Second, one may claim that most free-riders are unaware that they are free-riding, and that their ignorance absolves them of wrongdoing.

3.1. *Selfish Contributors*²⁵

It is likely that many people who vaccinate do so for primarily selfish reasons. For example, public health efforts to promote vaccination usually emphasize the benefits of individual immunity to disease. One list of ten reasons to vaccinate identifies nine ways in which the vaccinated individual will benefit (and just one way in which becoming vaccinated will help others).²⁶ Additionally, physicians are required by the National Childhood Vaccine Injury Act of 1986 (NCVIA) to provide a vaccine information statement (VIS) whenever a vaccine is administered. These statements, produced by the Centers for Disease Control and Prevention (CDC), highlight the personal benefits and risks of vaccines.²⁷ Even if some people who become vaccinated have other-regarding motives, it is plausible that many people are motivated to vaccinate primarily out of self-interest. Consequently, it may not seem unfair (or it may seem less unfair) for vaccine refusers to make uncompensated use of the contributions vaccinated persons have made to herd immunity. After all, if vaccinated persons got what they wanted from vaccination—individual immunity—how can it be unfair to make uncompensated use of the unintended way in which their individual immunity contributes to herd immunity?

I agree that there may be little moral worth in a self-interested decision to become vaccinated. However, the *fairness* argument for a moral duty to vaccinate does not depend upon the moral worth of vaccinators' intentions. It depends,

instead, upon the moral importance of fair allocations of the costs and benefits of social cooperation. And, the self-interested motivations of the vaccinated neither negate the value of herd immunity nor change the demand that one make a fair contribution to herd immunity when one is able to do so. More generally, the fact that one may have a self-interested motivation to make a fair contribution to a public good does not undermine the fact that one has made a fair contribution to a public good. And, a person who makes use of a public good, without making fair contribution, makes unfair use of the contributions of others, even if others contributed for selfish reasons.

3.2. *Ignorant Refusers*

A similar objection may be made based on the motivations of vaccine refusers. While some vaccine refusers are aware that they are free-riding on herd immunity (as I discussed above), many others are likely unaware of this fact. Some deny that vaccines provide individual immunity or that their widespread use reduces incidence of disease.²⁸ Others seem not to understand how herd immunity works.²⁹ Still others believe that vaccines are sufficiently dangerous that it is not fair to expect persons to become vaccinated.³⁰ The fact that these vaccine refusers do not believe that they are free-riding on herd immunity may seem to mitigate (or eliminate) the moral wrongness of their refusal.

I agree that vaccine refusers who are unaware that they are making unfair use of herd immunity may be less morally blameworthy than they might otherwise be. (I assume, for the purpose of making this point, that their ignorance is not culpable.) So, for example, such persons may not be acting from an intention to treat other persons (e.g., vaccinated persons) as mere means. They may not be treating vaccinated persons disrespectfully. However, the fact that vaccine refusers may not know that they are free-riders does not change the fact that they are free-riders, and that their use of herd immunity is substantively unfair. They are not making a fair contribution to schemes for the production and maintenance of herd immunity, even while they are making use of this public good. There is a moral reason—*fairness*—for them not to act in this way. If they are not morally responsible for their failure to recognize this moral reason, that may diminish the blame they are owed for their unfair use of herd immunity. But it does not change the fact that they are making unfair use of this public good.³¹

4. THE VULNERABLE

Two additional moral reasons in favor of vaccination are grounded in the fact that some members of society are unable to (reasonably) acquire individual immunity through vaccination. These vulnerable members of society include persons for whom vaccines fail to generate or maintain individual immunity (often including the elderly),³² and persons who are too young or too sick to be safely vaccinated.³³

Those who are unable to acquire individual immunity, or who are unable to do so at a reasonable cost, generally do not contribute to herd immunity, even though they benefit from it. However, these persons are not free-riders. It is not unfair for them to benefit from herd immunity without contributing to it, since there is no fair method of contribution available to them. Also, persons who *do* free-ride on herd immunity do not treat these vulnerable persons unfairly, since the vulnerable do not generally contribute to the public good of which free-riders are making unfair use. Therefore, concern for the vulnerable grounds duties that are distinct from a duty of fairness. These include a duty to show appropriate concern for the vulnerable and, relatedly, a duty to take reasonable steps to avoid harming them.

4.1. Duty to Care for the Vulnerable

The vulnerable are dependent upon herd immunity for protection from disease. By definition, the vulnerable are unable to acquire individual immunity (or at least to do so at a reasonable cost). The fact that the vulnerable cannot help themselves, but must depend upon the efforts of others, is a weighty reason in favor of becoming vaccinated. Of course, there may be many different reasons for showing special concern for the vulnerable, and I don't intend to work out the foundational issues in this paper. Instead, it should suffice to note that advocates of diverse moral theories endorse special concern for the vulnerable. These include Kantians,³⁴ Utilitarians,³⁵ Care Ethicists,³⁶ and Roman Catholics.³⁷ Importantly, our duties to the vulnerable are not exhausted by a general duty of beneficence, that is, a duty to advance the interests of (some) others. These are persons whose interests ought to be given special consideration, for example, two-month-old infants, eighty-seven-year-old grandmothers, or people fighting cancer and kidney disease.

Among the "the vulnerable" to whom one owes special concern, I have included members of one's own community who depend upon herd immunity for protection from disease. The vulnerability of such persons generates a special duty to show concern for their well-being, for example, by vaccinating oneself and one's children. Among "the vulnerable," I also include members of societies that lack herd immunity. These persons are vulnerable because, in the absence of herd immunity, they remain at risk of personal and social harms caused by large-scale disease outbreaks.³⁸ The vulnerability of such persons also generates a duty to show special concern. One may demonstrate this concern by supporting global immunization efforts (e.g., by donating to the relevant charities or by agitating for domestic or international political action). At the very least, one ought not to undermine efforts aimed at developing herd immunity in societies in which vaccine-preventable diseases are prevalent and serious. If participating in the social practice of vaccine refusal undermines global immunization efforts (as some have argued), then the vulnerability of members of societies that lack herd immunity generates a moral reason to become vaccinated.³⁹

4.2. *Duty to Avoid Negligent Harm*

Communities that possess herd immunity are less likely to experience major disease outbreaks. However, individual members of these communities may still become infected if they lack individual immunity (e.g., because they have not been vaccinated or because vaccines do not provide them with individual immunity). International travel places such vulnerable persons at risk of infection. When they travel outside of their local communities, or when they are exposed to people who do, they may be exposed to diseases against which they have little (or no) protection. For example, most recent cases of measles outbreaks in the United Kingdom have occurred after non-vaccinated persons became infected abroad.⁴⁰

A person who chooses not to vaccinate thereby chooses to make herself a possible vector for infecting vulnerable persons. For example, consider the 2008 measles outbreak in San Diego, California. It began when a non-vaccinated child became infected during a visit to Switzerland. This child infected students at his school and children (including an infant) in the waiting room of his pediatrician's office.⁴¹ (Notably, his pediatrician was Dr. Bob Sears.) Of the persons who were infected in this outbreak, three-fourths had refused vaccination for nonmedical reasons (and were free-riders). The remaining one-fourth were members of vulnerable populations. Importantly, an act of vaccine refusal also makes one a possible means for infecting vulnerable persons in *other* communities, that is, when one travels abroad or when one comes into contact with people who do.

A decision not to vaccinate often shows immoral disregard for the vulnerable, even if a non-vaccinated person never becomes infected, and even if he never infects anyone else. This is because it is immorally negligent to fail to take reasonable means to avoid harming other persons. Importantly, the immorality of negligence is distinct from the immorality of unfair free-riding. While free-riding makes unfair use of others' contributions to herd immunity, negligence manifests insufficient commitment to preventing oneself from harming others. Also, a non-vaccinated person's negligent indifference to his capacity to infect others may be worse, from a moral point of view, when it is directed toward the vulnerable, rather than toward his fellow free-riders. Other free-riders have, themselves, violated a moral (or prudential) duty to avoid infection, since they could have taken reasonable measures to avoid becoming infected (i.e., becoming vaccinated). If a free-rider becomes infected, he shares some responsibility for this fact with the person who infects him.⁴² In contrast, a vulnerable person lacks a reasonable means by which to prevent himself from becoming infected. If he becomes infected, much more of the responsibility for this fact may rest with the person who infects him.

5. CONCLUDING THOUGHTS

Recent increases in rates of vaccine refusal have started to compromise herd immunity in the United States and in some other countries.⁴³ Researchers have found that those who refuse routine childhood vaccination are motivated by a diverse set of beliefs.⁴⁴ In this paper, I have focused on the belief that a parental prerogative to prioritize the interests of one's children provides a moral justification for vaccine refusal.

In Sears's words, "we can't really fault parents" who "base [their] decisions on what's best for [their] own child as an individual," rather than what is "good for the country as a whole."⁴⁵ According to such a prerogative, a parent may choose to promote her child's interests under circumstances in which failing to promote her child's interests would better promote the interests of society-at-large. I have accepted the existence of this sort of prerogative without argument. I admit, for the purpose of this paper, that parents do not have to show the same concern to all children (or all people) as they show to their own offspring. However, I have argued that this moderate parental prerogative could provide a moral justification for vaccine refusal only if the moral case for vaccination were exhausted by considerations of beneficence (i.e., general concern for the interests of other people). But this is false. Considerations of *fairness* and concern for the *vulnerable* generate additional weighty moral reasons to vaccinate. These reasons in favor of vaccination cannot be defeated by this moderate prerogative of parental partiality.

Reasons of fairness and concern for the vulnerable might be defeated by wider prerogatives of parental partiality. For example, suppose that parents were morally permitted to prioritize the interests of their children even when doing so was unfair or when it showed no concern for vulnerable persons. Such a parental prerogative would, of its nature, defeat reasons of fairness and concern for the vulnerable. While it is beyond the scope of this paper to evaluate the possibility of such a wider parental prerogative, it is worthwhile to close with two observations on this point. First, Sears seems to think that vaccine refusal is permitted by the moderate prerogative of parents to prioritize the interests of their children over the aggregate interests of society. I have shown that this is false. Second, wider parental prerogatives are likely to require more defense than does the moderate prerogative on which Sears seems to rely. If the (supposed) moral permissibility of vaccine refusal depends upon the existence of wider parental prerogatives, then those who defend the moral permissibility of vaccine refusal will have to defend these wider prerogatives. Indeed, some advocates for the moral permissibility of vaccine refusal invoke and defend expansive parental rights.⁴⁶ However, I must leave the critical examination of these libertarian or (paleo)conservative conceptions of the family for another time.

NOTES

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1. Sears (2007), p. 220. There is some reason to think that Sears has recently distanced himself from his previous views on vaccination. See Mnookin (2011).

2. I use the terms “Dr. Bob” and “Dr. Bob Sears” to distinguish the author of *The Vaccine Book* from his father (Dr. Bill Sears) and from his brother (Dr. Jim Sears), both of whom are media personalities in their own right. Also, Dr. Robert Sears uses the term “Dr. Bob” to identify himself, for example, “Dr. Bob’s Alternative Vaccine Schedule” (2007), p. 236.

3. Many physicians report that parents often bring Sears’s book (or his ideas) with them to office visits (Offit and Moser 2009), pp. e164–e169. Sears’s book has been a best-seller for the six years since its release, and it is now the second best-selling book on *Amazon.com* in the category of “Best Sellers in Children’s Health.” <http://www.amazon.com/Best-Sellers-Books-Childrens-Health/zgbs/books/282948> (accessed January 28, 2013); Parikh, (2010).

4. I reject (what I take to be) Sears’s claim that the scope of the morality of vaccination extends only to the borders of one’s own country. The relevant moral community is humanity as a whole. Of course, my advocacy of an expanded scope for the morality of vaccination is not, by itself, a challenge to Sears’s characterization of the (supposed) tension between a prerogative of parental partiality and a duty to promote the public good.

5. Coulter (1991); Habakus and Holland (2011); Kirby (2006); Murphy (1993); Wakefield (2011).

6. Fine and Clarkson (1986), pp. 1012–1020; Last (1998); Spier (1998); Vermeersch (1999).

7. Centers for Disease Control and Prevention (2012a).

8. Anderson and May (1985).

9. For discussion of various falsehoods vaccine refusers endorse, and the errors in reasoning that lead them to endorse these falsehoods, see DeStefano (2007); Jacobson, Targonski, and Poland (2007); Offit and Moser (2009), pp. e164–e169; Navin (forthcoming).

10. Among other reasons, this is because herd immunity does not guarantee protection from disease, as has been illustrated by recent disease outbreaks in communities that possess herd immunity.

11. For the purpose of this paper, I accept the existence of the sort of parental prerogative Sears and others seem to endorse. I accept that parents have a right to promote their children’s interests even when doing so may not be an optimal means for promoting the interests of society. Furthermore, this sort of parental prerogative seems well within the mainstream. For discussion of parental prerogatives and their possible justifications, see Brighouse and Swift (2009), Brennan and Noggle (1997); Morse (1999); and Nussbaum (2000), chap. 4.

12. The fact that one has failed to vaccinate is evidence that one is making an unfair use of herd immunity only if vaccination would have been a fair method by which one could have contributed to herd immunity (e.g., one was not at elevated risk of vaccine complication), and only if one did not undertake an alternative means for making a fair contribution to herd immunity. I leave aside questions about whether alternative methods of making fair contributions to herd immunity exist (or what would be required for them to exist).

13. Nozick (1974).

14. Anderson and May (1985).

15. Arneson (1982), pp. 616–633; Cullity (1995); Boran (2006). The appendix in Cullity (1995) contains an extensive list of publications on “public goods,” with discussion of the different attributes that have been ascribed to this phenomenon.

16. A further question is whether a particular public good is sufficiently valuable to be worth the support of the community. I assume that herd immunity meets this condition.

17. Such a person may have a duty to pursue another means of contributing to herd immunity (e.g., financial or political support for public immunization efforts).

18. Arneson (1982), p. 622; Cullity (1995), pp. 5–7; Boran (2006), p. 99.

19. For the purposes of this paper, I remain agnostic about how best to characterize the “unfairness” of free-riding. Whether it ought best to be characterized in terms of treating someone as a “mere means,” treating someone disrespectfully, treating someone in a way he could reasonably reject being treated, etc., is beyond the scope of this paper. I discuss the possible significance of different conceptions of “unfairness” for my argument in section 3.2.

20. Sears (2007), pp. 96–97.

21. There is some empirical evidence that families of vaccine denialists are, on average, wealthier and better educated than the families of vaccinated children (Wei et al. 2009).

22. Cooper-Patrick (1999); Roter et al. (1997). Furthermore, Lareau (2003) has shown that there are pervasive class-based differences in the ways in which parents interact with authority figures on behalf of their children.

23. Offit and Moser (2009); Sears (2007).

24. Sears (2007), p. 241.

25. Here (and elsewhere) I characterize a parent who considers only the interests of her child when deciding whether to vaccinate as a “self-interested” agent. Admittedly, this is an idiosyncratic use of the term “self-interest,” since one’s child is not part of oneself. However, I use the language of self-interest because this is the language Sears uses, and because using this language allows me to treat parent-and-child as a single moral agent for the purposes of my paper. By obscuring the division between parent and child—and the prudential and moral duties parents have to their children—I can focus more clearly on the (supposed) tension between permissible “self-interest” and the duties one owes to others.

26. National Foundation for Infectious Diseases (n.d.).

27. English et al (2008); Centers for Disease Control and Prevention (2012b).

28. Beattie (1997); VacLib.org (2007).

29. Lydall (2009); Blaylock (2012).

30. Kirby (2006).

31. We may make a similar response in the case of parents who would refuse vaccination even in the absence of herd immunity. These parents are not motivated by a desire to make unfair use of the contributions of others, since they are not counterfactually responsive to such contributions. These parents may be less morally blameworthy for free-riding than they would be if they were inclined to vaccinate under conditions in which there were no herd immunity. However, the fact that these parents are indifferent to the existence of the public good of herd immunity does not change the fact that they are, in fact, making use of this public good without making a fair contribution toward it.

32. Grubeck-Loebenstein et al. (2009).

33. American Academy of Pediatrics (2012); Centers for Disease Control and Prevention (2011).

34. O'Neill (1980).

35. Ashford (2000).

36. Held (2006).

37. John Paul II (1991).

38. Notably, their exposure to most of the negative outcomes of massive disease outbreaks is insensitive to their immunization status. For example, individual immunity will not protect them against the economic costs of extended in-home quarantine.

39. For discussion of the impact of Western vaccine refusal movements upon international immunization efforts, see Leach and Fairhead (2007); Kata (2012).

40. Foreign and Commonwealth Office (2011).

41. Sugerman et al. (2010).

42. In cases in which parents have decided to make their children free-riders upon herd immunity, it is the parents (rather than their children) who have acted imprudently or immorally. In such cases, it is the parents (rather than their children) who will be partially responsible if their children become infected by a fellow vaccine refuser.

43. Omer et al. (2009); Omer et al. (2006).

44. Brown et al. (2010); Kennedy, Brown, and Gust (2005).

45. Sears (2007), p. 220.

46. Consider the views of William J. Wagner, who writes that “[p]arents, not the state, have responsibility for and authority over decisions concerning the raising of their children—including vaccination choices” (Wagner 2011), p. 45. In Wagner’s view, parents have a moral authority to make decisions for their children that are “sacred” and almost entirely beyond criticism (Wagner 2011), p. 45.

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