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Misunderstanding vaccine hesitancy: A case study in epistemic injustice

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ABSTRACT

This paper argues that vice-charging, the practice of charging other persons with epistemic vice, can itself be epistemically vicious. It identifies some potential vices of vice-charging and identifies knowledge of other people as a type of knowledge that is obstructed by epistemically vicious attributions of epistemic vice. The hazards of vice-charging are illustrated by reference to the accusation that parents who hesitate to give their children the MMR triple vaccine are guilty of gullibility and dogmatism. Ethnographic and sociological research is used to make the case that this charge is, in a significant range of cases, epistemically unjust and hinders attempts to make sense of vaccine hesitancy. This epistemic injustice consists in the representation of vaccine hesitant parents as less than full epistemic agents. A case is made for a more tolerant and inclusive approach, not only to vaccine hesitancy but also to other forms of unorthodoxy or non-compliance. The primary objective in these cases should be to achieve *Verstehen* of seemingly alien outlooks and practices so that policy makers and practitioners in public services can more effectively educate a sceptical public about the risks of vaccine hesitancy.

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1. The hazards of vice-charging

Epistemic vices are blameworthy or otherwise reprehensible attitudes, character traits or ways of thinking that systematically obstruct the gaining, keeping or sharing of knowledge.[1] Such vices include arrogance, closed-mindedness, dogmatism, gullibility and wishful thinking. *Vice-charging* is defined by Ian James Kidd as 'the critical practice of charging other persons with epistemic vice' (2016, p. 181). As Kidd notes, vice-charging is a striking feature of everyday social life.[2] Most of us are only too willing to attribute epistemic vices to other people, while failing to acknowledge our own epistemic vices. Vice-charging is partly evaluative: to describe someone as gullible or dogmatic is to evaluate them, and the implied evaluation is negative. Vice-charging is also usually intended as explanatory. We often explain what we regard as the defective epistemic conduct of other people by reference to their supposed epistemic vices. For example, the flawed thinking and planning in the run-up to the 2003 American invasion of Iraq might plausibly be explained by reference to the epistemic and other vices of senior members of the Bush administration.[3]

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In other cases, explanatory vice attributions are much less straightforward. As Kidd observes, critically legitimate vice-charging is difficult in practice, not least because 'we often see vice where none exists' (2016, p. 186). This is one of the many hazards of vice-charging, and reflection on these hazards helps to focus our attention on the possibility that vice-charging can itself be epistemically vicious.[4] There are several potential vices of vice-charging, and it is important to understand how epistemically vicious attributions of epistemic vices to other people can itself be an obstacle to knowledge. The knowledge that epistemically vicious vice-charging obstructs includes knowledge of other people. As well as reducing our ability to make sense of other people, this type of vice-charging is epistemically unjust in many cases. Seeing vice where none exists can be a form of epistemic injustice, and epistemic injustice is one of the epistemic vices of epistemically vicious vice-charging.

The discussion that follows is divided into three parts. Part 2 will give an account of when and how vice-charging goes wrong. Specifically, the focus will be on the different ways in which vice-charging can be epistemically vicious. Part 3 will consist of a detailed case study of problematic vice-charging. When parents do not respond as expected to public health messages about vaccinating their children, there is a tendency to explain this at least in part by reference to their gullibility and dogmatism.[5] This is an example of explanatory vice-charging: explaining flawed thinking and decision-making by refence to underlying epistemic vices, or intellectual failings like lack of understanding. However, consideration of so-called 'vaccine hesitancy' or 'vaccine anxiety' from an ethnographic perspective results in a different and more complex explanatory story in which the role of epistemic vices is far from obvious. Even if vaccine hesitant parents are misguided, many of their epistemic practices are arguably virtuous rather than vicious. This is something that is obscured by vice explanations of their conduct. Part 4 will spell out the deleterious epistemic consequences of epistemically vicious vice charging.

One of the advantages of focussing on the case of real-world vaccine hesitancy is that it avoids the dangers of oversimplification that is inherent in overreliance on fictional examples. Philosophical discussion of epistemic injustice continues to be dominated by two fictional examples that were first used by Miranda Fricker in a 2007 monograph. One is from Harper Lee's *To Kill a Mockingbird*, and the other from Anthony Minghella's screenplay of Patricia Highsmith's *The Talented Mr. Ripley*. In neither example is there any doubt that certain characters are guilty of a type of prejudice that results in epistemic injustice. The question is whether these characters – Herbert Greenleaf in *The Talented Mr. Ripley* and the jury in *To Kill a Mockingbird* - are *culpable* for their epistemically vicious prejudices.[6] However, if there is one thing that studies of vaccine hesitancy prove, it is that attributions of epistemic vice to individuals or groups of individuals in the real world are much less straightforward.

In Fricker's influential terminology, an epistemic injustice is a 'wrong done to someone specifically in their capacity as a knower' (2007, p. 1). Suppose that attributions of epistemic vice to some vaccine hesitant parents are defective in one of two ways: they see epistemic vice where none exists, or they exaggerate the role of parental epistemic vices in explaining their supposedly flawed epistemic conduct. Either way, the targets of defective vice-charging are the victims of a form epistemic injustice. It is less clear, however, that they have been wronged specifically in their capacity as knowers. This issue will be addressed in part 4, where a case will be made for what Mikkel Gerken describes as 'a broader notion of epistemic injustice that is not articulated in terms of knowledge' (2019, p. 2).[7] The concluding paragraphs will consider the relevance of the framework developed here for attempts to understand vaccine hesitancy in relation to COVID-19 vaccines.

2. Some vices of vice-charging

Suppose that X is the person to whom an epistemic vice V is attributed by Y. For example, Y accuses X of gullibility and justifies this attribution on the basis that only a gullible person

could believe some of the things that X believes. Suppose that X believes that the MMR vaccine causes autism. Since Y regards this belief as baseless, she hypothesises that X only has this belief (call it the belief that P) because he has been taken in by misinformation about the vaccine. The fact that X is taken in needs to be explained, and Y's explanation is that X is gullible. This is a *vice explanation* X's belief, an explanation of X's belief that P by reference to one or more of X's epistemic vices. One possibility is that X *is* gullible and believes that P because he is gullible. If this is how things are then Y's explanatory vice attribution is correct. However, it is also possible that Y's vice attribution is flawed and raises questions about Y's *own* epistemic conduct in trying to explain X's belief by reference to his supposed gullibility.

Although vice explanations are sometimes correct, those who seek such explanations of other people's beliefs can be accused of myopia in some cases. Vice explanations potentially overlook alternative, non-vice explanations. For example, Y's vice explanation of X's belief that P says nothing about X's *reasons* for believing that P, that is, the considerations that led X to hold the belief that P. Jonathan Dancy notes that 'there is a wide range of things we think of as capable of giving answers to the question "Why did he do that"?' (2000, p. 5). In the same way, there are many ways of answering the question 'Why does he think that?'. It is one thing to identify the causes of X's believing that P and another to identify his reasons for believing that P. Even if X's reasons are not good ones, they are still X's reasons, and we have not really understood X unless we have taken account of them. Furthermore, while X's reasons might not seem like good ones from our point of view, they might be in much better shape given X's background assumptions.

These complications draw attention to another potential difficulty with Y's explanation of X's belief that P by reference to X's epistemic vices. Those who provide such explanations are sometimes, and perhaps often, guilty of oversimplification. The oversimplification consists in assuming that epistemic conduct that strikes one as defective can be satisfactorily explained by reference to one factor – the target's epistemic vices – rather than a complex of interacting factors. What the vice-charger offers is a simple explanation in these cases, with the implication that the target's beliefs would be the same as one's own if only he or she were less epistemically vicious. The reality is often (though not always) more complicated, even in cases where the target's epistemic vices do play a role.

Furthermore, it is hard not to worry that Y's confident attribution of gullibility to X as a means of explaining X's belief that P significantly underestimates the difficulty of getting to the bottom of other people's beliefs and epistemic conduct, especially in cases of fundamental disagreement. Vice-chargers perhaps assume that they have greater insight into the springs of human conduct than they actually have. This is a form of intellectual overconfidence that points to another hazard of vice-charging: attributing epistemic vices to other people can all too easily comes across as arrogant and sometimes *is* arrogant. In these cases, charging another person with being epistemically vicious can serve as an expression of a sense of one's own intellectual superiority. In the imaginary dialogue between X and Y, one would not be surprised to discover that X finds Y's accusation offensively arrogant and might retaliate by asking what gives *her* the right to accuse other people of being epistemically vicious.

Intellectual myopia, oversimplification, overconfidence and arrogance are all epistemic vices. They are also some of the epistemic vices of vice-charging. This is not to say that vice-charging is necessarily epistemically vicious in these ways, only that those who engage in vice-charging need to take care not to lay themselves open to the charge of epistemically vicious vice-charging. This charge might conceivably be justified in the case of X and Y even if X *is* gullible and his gullibility plays *some* role in causing him to believe that P. If X is *not* gullible, and Y sees vice where there is none, then there is a straightforward sense in which Y's vice charge against X is unjust. The injustice in this case is epistemic even if Y does not wrong X in his capacity as a knower. If X's belief that the MMR vaccine causes autism is false – as it is - then X does not know that P. However, X might be wronged by Y's vice-charge even if the injustice is not epistemic in Fricker's sense.

This abstract description of the potential vices of vice-charging will have greater force if it can be illustrated by a realistic example. The phenomenon of vaccine hesitancy is the ideal example for present purposes. Vaccine hesitancy can be understood as behavioural, attitudinal, or both. *Behavioural* vaccine hesitancy consists in what the European Centre for Disease Prevention and Control characterises as a 'delay in acceptance or refusal of vaccines despite the availability of vaccination services'.[8] It is natural to think of vaccine refusal as underpinned by the hesitator's attitude towards vaccines. *Attitudinal* vaccine hesitancy has been defined as 'an attitude of ambivalence regarding vaccines' (Goldenberg, 2021, p. 3).[9] On this definition, outright hostility to vaccination is not vaccine hesitancy since hostility is not ambivalence. For present purposes, however, vaccine hesitancy can be understood as a hostile or ambivalent attitude towards vaccines, leading in some cases to vaccine refusal.

Prior to the development of vaccines that provide protection against Covid-19, vaccine hesitancy in relation to MMR was the most significant modern example of this phenomenon. However, research by Jennifer Reich, Melissa Leach and James Fairhead among others shows that explanations of vaccine hesitancy by reference to the gullibility, ignorance and dogmatism of resistant parents are well wide of the mark.[10] Not only are such explanations epistemically vicious, their debunking by Reich, Leach and Fairhead serves as a warning to those of us who are quick to resort to vice explanations of perspectives and practices that we regard as deeply misguided.[11]

3. Making sense of vaccine hesitancy

In an article published in the *British Medical Journal* in 1988, the Chair of the UK's Joint Committee on Vaccination and Immunisation described the impending introduction of a combined vaccine against measles, mumps, and rubella (MMR) as a 'big bang for vaccination' (Badenoch, 1988, p. 750). The vaccine was part of a Mass Childhood Immunisation Programme that was seen as one of the great success stories of modern health. The aim was to achieve the 95 per cent uptake of the MMR vaccine needed for herd immunity. However, in 1998 *The* Lancet published an early report of research by Dr Andrew Wakefield and his colleagues (Wakefield et al. 1998). The report, which was subsequently retracted, posited a causal link between the MMR vaccine and autism. While not claiming to prove a link, the report would have left readers with the strong impression that such a link existed.

Subsequent research found no evidence that the MMR vaccine causes autism, and the *British Medical Journal* described Wakefield's original article positing such a link as fraudulent.[12] In 2010, he was struck off the medical register by the General Medical Council, which found him guilty of serious professional misconduct. However, the damage to the MMR vaccination programme had already been done. By 2002, uptake of the vaccine had fallen below 85 per cent, and in some areas fell as low as 71 per cent. Wakefield is reported to be unrepentant and is now a major figure in the global anti-vaxxer movement. Experts are puzzled by the continuing impact of discredited research and the rise in anti-vaccine sentiment across the world. In *MMR and Autism: What parents need to know*, Michael Fitzpatrick comments: 'We have to explain how it has come about that a significant section of middle-class opinion in particular has come to reject, or at least seriously question, immunisation, regarded by many as one of the great achievements of medical science' (2004, p. xi).

The reference to class in this quotation is telling. Research in this area is often organised around the distinction between low-income and marginalised 'passive defaulters' and middle-class, well-educated, 'active resisters' (Fitzpatrick, 2004, p. 15). It is the behaviour of the latter that causes special consternation. It is assumed that they ought to know better, on account of their relatively elevated social status and level of education. In addition, active resisters have 'tended to accept the principles of a healthy lifestyle – as recommended by the government – in matters

such as diet and exercise, smoking and drinking alcohol' (Fitzpatrick, 2004, p. 16). It is therefore hypothesised that if the problem with active resisters is not lack of education then it must be some other intellectual or epistemic failing that accounts for their non-compliance. Gullibility and dogmatism are two epistemic vices that have been mentioned in this connection.

Blaming vaccine hesitancy on epistemic vices is part of a wider narrative that attributes the attitudes and behaviours of vaccine hesitant parents to a variety of cognitive or intellectual defects or deficits such as scientific illiteracy, cognitive bias and 'anti-expertise and science denialism among members of the public' (Goldenberg, 2021, p. 17). This is the so-called 'deficit model' of vaccine hesitancy. Explaining vaccine hesitancy by reference to the epistemic vices of hesitators is another version of the deficit model, assuming that epistemic vices are intellectual or cognitive deficits. Goldenberg highlights the inadequacies of the deficit model as she understands it.[13] The focus here is on the inadequacies of a version of the deficit model that tries to explain vaccine hesitancy by reference to epistemic vices like dogmatism and gullibility.[14]

On the issue of gullibility, much has been made of the extent to which anti-vaxxers use rumour to induce vaccine hesitancy among supposedly gullible parents. This explanation is used to explain vaccine hesitancy in first world and third world contexts. Leach and Fairhead note that a dominant theme in representations of vaccine hesitancy in Africa 'invokes the notion of rumour, and its capacity to spread rapidly among African populations that are, in turn, imaged as rather unreflective and gullible' (2007, p. 20). Regarding dogmatism, consider the following testimony at a congressional hearing on autism given by Karen Seroussi, the mother of a child with autism:

> We are not stupid – we are educated, informed parents who have done thousands of hours of research into autism. We did not come here to be lectured to; we came here to be listened to. We are full of ideas that you must hear. We know what happened to our children. How dare you think that you will be able to tell us otherwise.[15]

In response, Fitzpatrick observes that the professional understanding of research scientists and clinicians is the product of extensive training and cannot be acquired from the internet. At best, parents can acquire familiarity with one small aspect of a subject which allows them to select information that supports their preconceived convictions. While this may well be effective for campaigning purposes, such a 'narrow and selective approach can lead to the sort of dogmatic outlook expressed by Karen Seroussi, which is inimical to scientific inquiry and discussion' (Fitzpatrick, 2004, pp. 95–96).

While some may sympathise with this type of explanatory vice-charging, others will be put off by its tone of intellectual superiority. In any event, there is a more nuanced story to be told about the sources and epistemic standing of vaccine hesitancy. As Reich notes, 'we live in an age of personalization', in which 'we see heightened efforts to personalise medical care to meet the desires and needs of the individual' (2018, p. 11). Many parents engage in what Reich calls *individualist parenting*, 'expending immense time and energy strategizing how to keep their children healthy' (2018, p. 5). This model is inimical to a one-size fits all vaccination routine that, some parents argue, 'may not be appropriate for their children' (Reich, 2018, p. 11). Crucially, an individualist parenting philosophy 'directly contradicts the goals of public health, which expects parents to absorb a measure of risk to their own children in order to protect others' (Reich, 2018, p. 12).[16]

The epistemological implications of this parenting model are highlighted by Leach and Fairhead in their account of the child-centred and personalised parenting that is promoted by current parenting advice in Europe and America. As they note, 'a new equation has come to be drawn between the good parent and the parent who, as the best expert on their own child, seeks to negotiate parenting advice with their child's individual particularities' (Leach & Fairhead, 2007, p. 51). This 'particularistic view of child health' (Leach & Fairhead, 2007, p. 59) and the

'particularistic thinking' that underpins it 'characterizes the ways that many parents now think about vaccination, evaluating the actual, or potential, effects of vaccination on their own child in relation to his or her particular strengths or vulnerabilities' (Leach & Fairhead, 2007, p. 51). More to the point, the particularistic view of child health has epistemological consequences that bear on the question whether, when it results in vaccine hesitancy, this hesitancy is a consequence of parental epistemic vices.

Particularistic thinking is not a way of thinking about parenting that is, in and of itself, epistemically vicious.[17] To the extent that every child is a unique individual, with his or her distinctive strengths and vulnerabilities, parents who tailor parenting advice to the needs of their own children are not epistemically vicious on that account. One might have thought that particularistic thinking about one's own children promotes rather than obstructs knowledge of their individual needs and how best to meet them. The parenting advice given by health professionals is, of necessity, coarse-grained, and it is for parents to develop a more fine-grained perspective on what is best for their own children. But what if this results in vaccine hesitancy? Research suggests that in deciding whether to consent to vaccines, parents first consider the likelihood that their children will encounter the disease and then assess how badly they would be affected if they were to get the disease.[18] Since each child is seen as unique, very little account is taken of public health data about the risks for unvaccinated children. Tellingly, the parents in Reich's study who did not consent to the MMR vaccine for their children *did* consent to the tetanus vaccine since the risks of tetanus seemed much more compelling.[19]

Not vaccinating one's own children against MMR has collective consequences, but a failure to be influenced by these consequences is an ethical rather than an epistemological flaw.[20] Children who are unvaccinated by parental choice are effectively free riders who benefit from others' immunity. Free-riding is not, *per se*, epistemically vicious, however problematic it may be from an ethical standpoint. Of greater concern from an epistemological standpoint is the notion of parental expertise that is built into the particularist model. When it comes to their own children, parents view themselves as experts. As Reich puts it, 'parents generally, and mothers specifically, are expected to be experts on their own children' (2018, p. 68). They engage in a process of self-education to make informed decisions about their children's health risks. They weigh information from books, websites, and physicians 'alongside what they often see as their trump card: a sense of intuition about what they feel their children need' (2018, p. 70). Yet it is arguable that parents overestimate their expertise and the reliability of their intuitions about their children's needs.

Overestimating one's expertise and ability to estimate the risks facing one's children is epistemically vicious. However, talk of epistemic vice in this context needs to be weighed against the reality that, at least in the West, parents today are *expected* to be experts on their own children and to engage in personalised parenting. While it is important that 'the limitations of parental experience and study are recognized' (Fitzpatrick, 2004, p. 95), it is also important that parental expertise and study are not seen as worthless. There is a sense in which good parents *do* know their own children better than anyone else. They have information about their family history and vulnerabilities that play an important and *legitimate* role in decision-making about vaccinations. Parental intuition about the health status of one's own children is not a complete myth. Furthermore, one consequence of individualist parenting is 'a pronounced sense of personal responsibility, and assumption of personal blame, for any harm that might come to a child either through disease or through vaccination adverse effects (Leach & Fairhead, 2007, p. 69). As Goldenberg points out, 'while the safety of vaccines is sufficiently established for public health purposes, parents want to know if vaccines are safe for *their* kids' (2021, p. 36). Since individualist parenting is both time- and resource-intensive, it should come as no surprise that children in the U.S. who are unvaccinated by parental choice are likely to be white, have a mother who is married and college-educated, and live in a household with an income over $75, 000.[21]

Crucially for present purposes, personal responsibility is seen as a form of *epistemic* responsibility. As Leach and Fairhead note, 'the encouragement to research (or "look into it") and then make up your mind is a pervasive theme in MMR talk, and in parents' narratives about the process of deciding' (2007, p. 65). Parents 'describe the importance of conducting their own research, considering their own children's needs, and making independent decisions, based on their own knowledge and intuition' (Reich, 2018, p. 72). Yet, in other aspects of life, thinking for oneself and making independent decisions are generally regarded as epistemic virtues rather than vices. Kant claimed that, the motto of the Enlightenment is 'have the courage to think for yourself'. The parents described by the studies cited here can lay a reasonable claim to abiding by this motto, at least as far as parenting is concerned.

None of this is to say that vaccine hesitant parents who decide not to vaccinate their parents are doing the 'right' thing for their children, although it should be clear by now that the notion of the 'right' thing for one's children is far from straightforward. Nor is it to suggest that the epistemic conduct of all vaccine hesitant parents is epistemically virtuous. Apart from concerns about parents' overconfidence in their own expertise, there is also the issue of whether having the courage to think for oneself is epistemically virtuous in contexts in which one lacks the background knowledge that is necessary for one to be an *effective* independent thinker. Insisting on thinking for oneself rather that deferring to people with greater knowledge and understanding can be epistemologically disastrous, especially if one is deluded about the true extent of one's own competence.[22] Nevertheless, if there is one thing to emerge from the work of Reich and Leach and Fairhead, it is that talk of intellectual virtues and vices is far too blunt an instrument to make sense of the phenomenon of vaccine hesitancy. Vaccine hesitancy might be explicable by reference to parental epistemic vices in some cases but there is no good reason to suppose that vice explanations of vaccine hesitancy are appropriate in all, or even in most, cases. The reality is much more complicated, and vice explanations fail to do justice to this complexity.

Where does this leave attempts to explain vaccine hesitancy by reference to parental gullibility and dogmatism? In principle, there are two separate issues here. The first is whether the epistemic conduct of vaccine hesitant parents justifies the *attribution* to them of the vices of gullibility and dogmatism. The second is whether, even if these are among the epistemic vices of some vaccine hesitant parents, their vaccine hesitancy is best *explained* by reference to their gullibility and dogmatism. The latter question does not arise if vaccine hesitant parents are neither especially gullible nor especially dogmatic. However, if vice-charging in this case is unjustified, then we will need to face up to another question: if vaccine hesitant parents are not epistemically vicious, then how is it that they are misguided about the risks of vaccination (assuming that they are)?

Understood as a character trait, gullibility is the tendency to be easily deceived or taken in. A gullible person is excessively trusting and lacking in proper scepticism. It cannot be said that vaccine hesitant parents are gullible in this sense. Far from being excessively trusting in general, they display a distinct lack of trust in public health advice and large pharmaceutical companies. They do not take what doctors tell them on trust, and their insistence on doing their own research indicates a degree of intellectual independence that is plainly incompatible with gullibility. Gullible people are easily led. Vaccine hesitant parents are not. How, in that case, is their trust in alternative sources of information to be explained? Whether or not they are, in general, easily taken in, does their faith in the advice of people like Andrew Wakefield not suggest that they are easily deceived at least when it comes to the safety of vaccines? People who continue to insist that the MMR vaccine causes autism are peddling misinformation, and it might be argued that one would have to be gullible to be taken in by it.

There are several problems with arguing in this way. Given that vaccine hesitant parents are extremely sceptical about some sources of information, their supposed gullibility is highly selective and source-specific. However, if gullibility is a genuine character trait then one would

not expect it to be so selective. Instead of explaining vaccine hesitancy by reference to parent's gullibility, it is more easily explained as a matter of judgement. Parents who believe Wakefield display poor judgement, but this does not necessarily point to a general character flaw like gullibility. Furthermore, it is not true that all vaccine hesitant parents are taken in by Wakefield or other alternative sources. Many describe themselves as confused by conflicting claims about the safety of vaccines, and their decision not to vaccinate might have more to do with a policy of erring on the side of caution rather than the belief that Wakefield is right. To blame vaccine hesitancy on a trait like gullibility is to overlook the complexity of the parental decision-making process in many cases. To see vaccine hesitant parents as gullible is to imply that they are being manipulated rather than making up their own minds about what to do, but Reich's study in particular does not support this interpretation.

Dogmatism can be defined as an unwillingness to engage seriously with alternatives to beliefs one already holds.[23] Many of the vaccine hesitant parents described by Reich were not committed to any specific view about the MMR vaccine prior to having children. At this point, they had no beliefs about vaccine safety. Hence, the question whether they were willing to engage seriously with alternatives to their beliefs about vaccine safety does not arise. Suppose, next, that some parents concluded, on the basis of their own research and contrary to the advice of their child's paediatrician, that the MMR vaccine is unsafe. The charge of dogmatism is still problematic since parents in this category continued to spend time engaging with the official view. Since they were under pressure to follow the standard advice about vaccine safety, they devoted considerable time and energy to the task of justifying their refusal to accept the official view. Of necessity, this meant engaging with the official view, if only to debunk it. This is not the behaviour of a person who is unwilling to engage seriously with alternatives to beliefs she already holds.[24]

The real basis of the charge of dogmatism is not that parents who decide not to vaccinate their children are unwilling to *engage* with the official view but that they *reject* it. In other words, having made up their minds, they stick to their guns, regardless of the official advice. However, the mere fact that one refuses to change one's mind does not make one a dogmatist. It all depends on whether one is willing to consider alternative perspectives. If, after studying the official advice, one concludes that it is misguided, one might be accused of coming to the wrong conclusion. However, it is one thing to come to the wrong conclusion about something and another for one's thinking to be dogmatic. The charge of dogmatism is well wide of the mark in many cases of vaccine hesitancy given the seriousness with which parents take the task of finding out what is best for their children in the light of conflicting advice.

Gullibility and dogmatism are not the only epistemic vices. In an influential discussion, Linda Zagzebski gives the following examples of what she calls *intellectual* vices: 'intellectual pride, negligence, idleness, cowardice, conformity, carelessness, rigidity, prejudice, wishful thinking, closed-mindedness, insensitivity to detail, obtuseness and lack of thoroughness' (1996, p. 152). After reading Reich and Leach and Fairhead, can one really say, hand on heart, that the parents they describe display many, if any, of the vices on this list? These parents are far from idle or careless or conformist. Many are impressively thorough in their research and go into considerable detail even if they overestimate their ability to understand the science. The possibility that they display other epistemic vices cannot be ruled out, but perhaps enough has been said to cast doubt on attempts to explain their views about vaccine safety by reference to their supposed epistemic vices. If they are epistemically vicious, one suspects that they are no more so than the average person.

Apart from the danger of seeing vice where none exists, there is a more general issue with vice explanations of vaccine hesitancy. These explanations tend to be individualistic, but 'vaccination is quintessentially social' (Leach & Fairhead, 2007, p. 163). While institutions and groups can be epistemically vicious, the epistemic vices that figure in vice explanations of vaccine hesitancy tend to be *personal* failings and to indicate defects in individual thinking. However, 'vaccination

is not something that parents only think about for themselves, or speak about with health professionals. When considering vaccination, parents interact with a much wider social world. Of particular importance are discussions with other parents' (Leach & Fairhead, 2007, p. 61). To the extent that vice explanations ignore the social dimension of thinking and decision-making about vaccine safety, they are arguably misguided in principle.

There remains the question how to explain the fact that many vaccine hesitant parents end up believing falsehoods about vaccine safety if their thinking is not only *not* epistemically vicious but also, as I have been arguing, epistemically virtuous in certain respects. How can epistemic virtue lead to error? It is a familiar point that one can do one's best, epistemically speaking, and still end up with false beliefs. Such beliefs might even be epistemically justified. Being epistemically justified is one thing for a belief, being true is another. In hostile environments in which misinformation is in wide circulation, even a careful and conscientious inquirer might end up with false beliefs, but this is entirely consistent with carefulness and conscientiousness being epistemic virtue rather than vices. Epistemic virtues such as those displayed by some vaccine hesitant parents do not always result in truth or accuracy. What makes them virtues is that they are *generally* beneficial, epistemically speaking, as indeed they are.

A more radical response to the suggestion that the epistemic virtues of vaccine hesitant parents lead them to error would be to dispute the imputation of parental error. The supposed error consists in believing falsehoods about vaccine safety. The pertinent falsehoods concern the riskiness of vaccines. In essence, population-level studies of adverse side effects indicate that vaccines are much less risky than parents believe. However, this is not how parents think about risk. As noted above, the issue for many hesitant parents is not whether vaccines are safe at a population level but whether they are safe for their child in relation to his or her particular strengths or vulnerabilities. This question cannot be settled by quoting population-level figures. Parents worry about unknown or unknowable factors that may affect their child in particular, and are not reassured by being told that adverse events are very rare.[25] There may be all sorts of reasons for judging that parents who think in this way are somehow missing the point but it is at least not obvious that they are missing the point as *they* see it or that their beliefs about the safety of vaccines in relation to their own children are straightforwardly false. The attribution of error in these cases can be as problematic as the attribution of epistemic vice.

4. Vice charging and epistemic injustice

What are the epistemic consequences of epistemically vicious attributions of epistemic vice? One consequence is that such attributions make it harder for us to know or understand other people. The type of understanding that epistemically vicious vice-charging obstructs is *Verstehen*. To acquire Verstehen of another human being is to be able to see things from their point of view, in terms of their reasons and categories of thought. Verstehen requires empathy rather than a rush to judgement. In the social sciences, it consists in the attempt to understand social phenomena "from within", that is, 'from the point of view of the social agent' (Martin, 2000, p. 3). In psychology, it consists in the attempt to understand other minds from within. It is an exercise in *sensemaking*, the project of making sense of another person's take on the world, especially when that take is very different from one's own.[26]

Vice attributions and vice explanations do not offer a 'from within' understanding of another person. They are external judgements about a person's defects rather than an attempt to grasp their reasons 'from the inside'. Verstehen requires a willingness to engage with another person's subjectivity. Dismissing vaccine hesitant parents as dogmatic and gullible does not do that. Far from delivering anything recognisable as Verstehen, it obstructs it. It results in what José Medina calls 'insensitivity', that is, 'being cognitively and affectively numbed to the lives of others: being

inattentive to and unconcerned by their experiences, problems, and aspirations; and being unable to connect with them and to understand their speech and action' (Medina, 2013, p. xi). Once one explains another person's beliefs by reference to their epistemic vices, there is little incentive to cultivate sensitivity or to dig deeper and seek a more nuanced and sympathetic understanding of their speech and action. To attribute other people's thinking to their epistemic vices makes it all too easy not to take them seriously as active epistemic agents who are capable of making up their own minds about complex matters. To ascribe their vaccine hesitancy to gullibility is effectively to deny them epistemic agency, and instead represent them as passively absorbing misinformation. This denial of agency is what the potential epistemic injustice of vice-charging consists in.

If we are serious about understand vaccine hesitancy, and developing counterstrategies, we need to take seriously the observation that vaccine hesitant parents have their own reasons, and that they cannot be properly understood without understanding the reasons for which they do what they do. In Constantine Sandis' terminology, an *agential reason* is 'any consideration *upon which* one actually acts or refrains from doing so' (2015, p. 267). If the aim is to grasp the considerations upon which some vaccine hesitant parents refrain from giving their children the MMR vaccine, what is the best way of unpacking these reasons in a way that does justice to their complexity and the social dimension of decision-making about vaccines? A sociological or ethnographic perspective is much more likely than vice-charging to deliver Verstehen in this context.

From an ethnographic perspective, 'a major aim is to rescue and bring to light parental framings, and to show how they make sense in their particular contexts' (Leach & Fairhead, 2007, p. 10). Informal conversation in social settings where parents take their babies and small children, as well as structured interviews with parents and health professionals, played a key role in Leach and Fairhead's research. To avoid recycling stereotypes, they began by looking at parents' broader perspectives on raising a healthy child in a specific social setting. Their study was an exercise in sensemaking and engaging with the subjectivities of vaccine hesitant parents. In a different context, the sociologist Arlie Russell Hochschild used a similar method to arrive at an understanding of people on the right of American politics who voted for Trump. The result was her much praised book *Strangers in Their Own Land: Anger and Mourning on the American Right*.[27] As with ethnographic studies of vaccine resistance, the objective was Verstehen.

Some may feel that this approach threatens a pernicious relativism, with the implication that the views of the people studied by Reich, Leach and Fairhead, and Hochschild are just as valid as those of their mainstream critics. There is also the question of how far sensemaking can or should go. Are there not people whose views put them beyond the pale and beyond the limits of legitimate sensemaking? Sensemaking implies a degree of respect for one's subject but are there not subjects who, on account of their bizarre views, are not worthy of this kind of respect? These are important questions which cannot properly be tackled here. However, while such concerns might be legitimate in some contexts, the idea that vaccine hesitant parents are beyond the pale or not worthy of respect is itself beyond the pale. The great merit of the more tolerant and inclusive approach recommended here is that it serves as a barrier against elitist condescension.

It was suggested above that seeing epistemic vice where none exists, or exaggerating the role of parental epistemic vices in explaining their supposedly flawed epistemic conduct in relation to vaccinations, are forms of epistemic injustice. An epistemic injustice in Fricker's sense is a wrong done to someone specifically in their capacity as a knower. A central form of epistemic injustice is *testimonial* injustice. A speaker 'suffers a testimonial injustice just if prejudice on the hearer's part causes him to give the speaker less credibility than he would otherwise have given' (2007, p. 4). One specific type of prejudice is *identity prejudice*. This is Fricker's label for 'prejudices against people *qua* social type' (2007, p. 4). Testimonial injustices can be systematic or incidental. The former are produced 'not by prejudice *simpliciter*, but specifically by those

prejudices that track the subject through different dimensions of social activity' (Fricker, 2007, p. 27). If a subject is 'wrongfully excluded from the community of trusted informants', this means that 'he is unable to be a participant in the sharing of knowledge' (Fricker, 2007, p. 132). He is 'demoted from subject to object, relegated from the role of active epistemic agent' (Fricker, 2007, p. 132). This leads Fricker to conclude that the intrinsic harm of testimonial injustice is *epistemic objectification*: 'when a hearer undermines a speaker in her capacity as a giver of knowledge, the speaker is epistemically objectified' (Fricker, 2007, p. 133).

How much of this framework is applicable to vice-charging of vaccine hesitant parents? When vaccine hesitant parents who opt not to vaccinate their children are wrongly accused of epistemic vices like dogmatism and gullibility, they are not victims of testimonial injustice to the extent that they are not in the business of testifying in the philosophical sense. They are not necessarily telling anyone else anything but simply making up their own minds about what to do, based on their own research and conversations with other parents. If they are victims of prejudice, the prejudice at issue here is not identity prejudice unless one is prepared to regard 'vaccine hesitant' as a social type. Nor is it the kind of prejudice that tracks white, educated, predominantly middle-class targets through different dimensions of social activity.

Despite this, the ethnographic and sociological studies cited here do suggest that the vice-charging of vaccine hesitant parents is, in at least in some cases, unjust. The challenge is to capture the relevant form of injustice. To say that they are wronged specifically in their capacity as *knowers* is to concede a point that one might not wish to concede: that these parents have genuine knowledge to impart. The present case is very different from the ones discussed by Fricker. It is not in question that Marge Sherwood and Tom Robinson are in possession of valuable pieces of *knowledge*. However, to see some vaccine hesitant parents as victims of epistemic injustice, it is not necessary to think that they know everything they claim to know. If their beliefs about the safety of the MMR vaccine are assumed to be false, then these beliefs do not constitute knowledge. In that sense, these parents are not wronged in their capacity as knowers, even though it is not in dispute that they know their own children.

Other critics have pointed to the limitations of Fricker's characterisation of epistemic injustice in terms of knowledge. Gerken notes that 'someone who is warranted in believing that *p* but insufficiently warranted to know that *p* can also suffer epistemic injustice' (2019, p. 2). There are cases in which a subject is wronged 'specifically in her capacity as an epistemic subject' (Gerken, 2019, p. 2) without being wronged specifically in her capacity as a knower. It is debatable in these cases whether being wronged *qua* subject amounts to being demoted from subject to object. Gaile Pohlhaus Jr. notes that this description does not even fit Fricker's own examples. Marge and Tom are both 'perceived as *subjects*' (2014, p. 104) by their interlocutors. The problem is that they are treated as less than *full* epistemic subjects, where this consists in '*being relegated to the role of epistemic other, being treated as though the range of one's subject capacities is merely derivative of another's*' (Pohlhaus Jr., 2014, p. 107).

Is this the sense in which some vaccine hesitant parents are wronged by accusations of gullibility and dogmatism? There is something to be said for this view, especially when vaccine hesitancy is attributed to a gullible response to misinformation or peer pressure. To see vaccine hesitant parents as tricked or manipulated into doubting the advice of health professionals is to see them as passive epistemic victims rather than as active subjects making up their own minds. The sense in which their capacities are viewed as merely derivative of another's is that they are deemed to have simply taken on board, without independent critical reflection, anti-vaccination propaganda. Describing such parents as being relegated to the role of the epistemic other is going too far but they are certainly relegated from the role of active epistemic agent. This is the clearest sense in which their treatment is epistemically unjust. The reality is not that these parents are too passive but that they are hyper-active in their opposition to 'passive acceptance of established, normal public-health routines' (Leach & Fairhead, 2007, p. 3). They talk to one another but 'little sense emerges of anything resembling peer pressure

to vaccinate or not' (Leach & Fairhead, 2007, p. 63). The only peer pressure they face is the pressure to do their own research and make up their own minds rather than blindly accept the official guidance.

It is always possible to take the view that all this talk of making up one's own mind is a form of false consciousness, and that the reality of parental decision-making is at variance with the self-image of vaccine sceptics. However, if they are not genuinely making up their own minds, then should the same not be said of the many parents who accept unquestioningly the official guidance to vaccinate? Yet the latter parents are not accused of being epistemically vicious on account of their compliance. It is only non-compliant parents who are charged with epistemic vice. This points to the biggest pitfall of vice-charging, the ever-present temptation to see epistemic vice every time one encounters a group of non-conformists whose views or conduct are fundamentally different from one's own. Sometimes, the vices one sees are real but not always. However, given the biased nature of vice-charging - the fact that we are far more likely to engage in vice-charging of people whose views are different from our own than those who agree with us – it is worth giving serious consideration to a policy of sensemaking rather than vice-charging. From an educational perspective sensemaking is indispensable: public health officials who wish to educate a sceptical public about the benefits of getting themselves or their children vaccinated would be well advised to start by trying to comprehend the far from straightforward and not necessarily disreputable sources of vaccine hesitancy.

Before bringing the discussion to a close, there is one more question to consider: what is the relevance of the framework developed here for attempts to understand vaccine hesitancy in relation to COVID-19 vaccines? The discussion so far has focussed on the specific case of the MMR vaccine, but is COVID-19 vaccine hesitancy any different? The exact extent of such hesitancy is still not clear. However, surveys indicate that a significant proportion of registered voters in America do not intend to take a COVID-19 vaccine.[28] The main issue here is whether adults will vaccinate themselves, not whether they will vaccinate their children. This is one important difference between COVID-19 and MMR vaccine hesitancy. The question remains, however, whether vice explanations of COVID-19 vaccine hesitancy are any more plausible than parallel explanations of MMR vaccine hesitancy.

Preliminary ethnographic research suggests that so-called 'COVID-19 no-vaxxers' are, in many cases, not overall anti-vaxxers.[29] Their concerns are specifically about the COVID-19 vaccine in its various forms. Some are 'motivated to distrust public-health authorities who they've decided are a bunch of phoney neurotics, and they're motivated to see the vaccine as a risky pharmaceutical experiment, rather than as a clear breakthrough that might restore normal life' (Thompson, 2021). Others worry about unknown long-term side effects. In this connection, an article in *The Atlantic* quotes one African American as saying 'The fact that there is no way [for me] to sue the government or the pharmaceutical company if I have any adverse reactions is highly problematic to me'.[30] Scepticism about vaccines is also linked to libertarian concerns about government-imposed lockdowns in response to the COVID-19 pandemic and the impact of lockdowns on individuals who are already economically marginalised.

While it is conceivable that epistemically vicious thinking is at the root of some of these concerns, it is not obvious that it is at the root of all of them.[31] People have a variety of reasons for not getting vaccinated, and some are better than others. In this case, there is also a significant political dimension. Some individuals are vaccine hesitant because they believe conspiracy theories about COVID-19. These conspiracy theories are related to a range of other conspiracy theories.[32] To the extent that conspiracy thinking is epistemically vicious, this points to a vice explanation of some COVID-19 vaccine hesitancy but there are also hesitators who are not conspiracy theorists.[33] It is also important to distinguish between producers and consumers of conspiracy theories.[34] Ahmed notes that 'the key protagonists in the 'anti-vaxx industry' are a coherent group of professional propagandists' who run 'multi-million-dollar organisations, incorporated mainly in the USA, with as many as 60 staff each' (2021, p. 366). To explain the anti-vaxx

activities of such propagandists in terms of their epistemic vices is to miss the point. All the indications are that their motives are political or financial and that these are the terms in which their activities are best explained and understood.[35]

While research into COVID-19 vaccine hesitancy is still in its infancy, the discussion so far suggests the following: people have many different reasons for being COVID-19 vaccine hesitant, and it is not possible to make sense of their vaccine hesitancy without engaging in detail with their reasons and trying to understand why they strike some people as good reasons. A willingness to engage with the subjectivity of hesitators is essential, and vice explanations seem much more likely to obstruct than to facilitate Verstehen. The title of *The Atlantic* article cited above is 'Millions Are Saying No to the Vaccines. What Are They Thinking?'. As well as being fundamental, this question also has the merit of conceding that the people concerned *are* thinking. When it comes to any form of vaccine hesitancy, this is as good a place as any to start.[36]

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Notes

1. In the terminology of Cassam (2019a), this is an 'obstructivist' account of epistemic vice. Two other influential accounts of epistemic vice are 'reliabilism' and 'responsibilism'. Reliabilist vices are personal or sub-personal cognitive faculties or processes that produce a preponderance of false beliefs. Responsibilist vices are character traits that involve bad motives. See Battaly (2014) for more on the contrast between reliabilism and responsibilism.
2. 'We complain often and easily about arrogant celebrities, dogmatic politicians, greedy bankers, and cruel tyrants' (Kidd, 2016, p. 181).
3. This is the diagnosis offered in chapter 1 of Cassam (2019a).
4. I have done my share of vice-charging. See Cassam (2016, 2019a). Mea culpa, though I would like to think that at least *some* of my charges are not epistemically vicious.
5. See, for example, Fitzpatrick (2004).
6. Fricker thinks that the jury is culpable in a way that Greenleaf is not.
7. See, also, Pohlhaus (2014) on this issue.
8. Vaccine hesitancy (europa.eu)
9. Most of my work on this paper was done before the publication of Goldenberg (2021). She sees vaccine hesitancy as a reflection of 'poor public trust in science and the health professionals' (Goldenberg, 2021, p. 18). My account highlights other aspects of vaccine hesitancy but is consistent with Goldenberg's perspective. I have only been able to take limited account of Goldenberg's useful discussion.
10. Leach and Fairhead (2007); Reich (2018).
11. Another, much older, study in a similar vein is Rogers and Pilgrim (1994). In opposition to the assumption that non-compliant parents are irrational or driven by neurotic anxiety, their research into what they call 'rational' non-compliance starts with the assumption that parents' non-compliance 'is based on an informed rationale' (Rogers & Pilgrim, 1994, pp. 1–2).
12. Wakefield's article linking MMR vaccine and autism was fraudulent | The BMJ.
13. Goldenberg (2021).
14. Goldenberg mentions epistemic vices in passing. See Goldenberg (2021, p. 30). There is a case for treating the cognitive biases she mentions as epistemic vices. See Cassam (2019a, pp. 24–27).
15. Cited by Michael Fitzpatrick. See Fitzpatrick (2004, p. 94). There is some reason to think that this reference should be to Karyn rather than Karen Seroussi. Karyn Seroussi is the author of a book on childhood autism. See Seroussi (2000).
16. See, also, Goldenberg (2021, pp. 31–33).
17. See Cassam (2018) for an exposition and defence of particularism in a different context.
18. Reich (2018, pp. 75–76).
19. See Pru Hobson-West (2003) for a persuasive account of parental attitudes to risk and uncertainty. As she notes, parents tend to think in terms of uncertainty rather than population-level risk. Some parents express concerns about the long-term evolutionary consequences for human health of using vaccines derived from

animal tissue. Such unknowable unknowns 'would clearly be difficult to factor in, no matter how much risk assessment is carried out' (Hobson-West, 2003, p. 279). See, also, Goldenberg (2021, p. 34).

20. For further discussion of the ethical issues, see the conclusion to Reich (2018).
21. Reich (2018, p. 14). Rogers and Pilgrim describe many of the parents in their study as 'probably paragons of virtue for positive health promotion for their children (1994, p. 20), except in relation to the issue of immunisation.
22. As Hardwig puts it, 'because the layman is the epistemic inferior of the expert (in matters in which the expert is expert), rationality sometimes consists in refusing to think for oneself' (1985, p. 336).
23. This is the account of dogmatism given in Battaly (2018).
24. It is also worth noting that in Rogers and Pilgrim's study, 'it was generally the case that dissenting parents began as compliers with the traditional medical regimens and became non-compliers over time' (1994, p. 14). Past compliance 'was regretted because of a lack of thought about the issue' (Rogers & Pilgrim, 1994, p. 16), and eventual non-compliance 'was associated with an informed and active choice' (Rogers & Pilgrim, 1994, p. 17). Reflecting on past immunisation decisions, 'it was as if information and critical reflection had given them insight, which they lacked in the past and others currently lack' (Rogers & Pilgrim, 1994, p. 17).
25. Hobson-West (2003); Goldenberg (2021, p. 34).
26. See Weick (1995) for more on sensemaking.
27. Hochschild (2016).
28. Civiqs | Coronavirus: Vaccination
29. Thompson (2021).
30. Thompson (2021).
31. Epistemically vicious thinking is described and discussed in Cassam (2019a, chapter 3).
32. Ahmed (2021).
33. The extent to which conspiracy thinking is epistemically vicious is also controversial.
34. See Cassam (2019b) on the significance of the distinction between conspiracy theory producers and consumers.
35. This applies to conspiracy theories more generally, as argued in Cassam (2019b).
36. I thank Deborah Ghate and two referees for extremely helpful comments on an earlier draft of this essay.

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