Parenting as politics: Social Identity Theory and vaccine hesitant communities

Introduction

While rates of childhood vaccination are high and stable in the developed world, (Dube et al., 2013, Ward et al., 2012) vaccine hesitancy and refusal (VHR) remains a problem, particularly because of enclaves with much lower rates of vaccination. Low vaccine coverage rates put communities at risk of outbreaks (Omer et al., 2008), during which vaccine-preventable diseases may infect those too young to be vaccinated, those whose immunity has waned, those whose immune systems are compromised, and those for whom vaccines did not ‘take’ in terms of the individual developing the required immune response. The threat generated by non-vaccinators to what is known as ‘herd immunity’ renders low-vaccination enclaves an obstacle to the goal of preventing children from catching—and potentially dying from—communicable diseases, constituting a governance problem. However, because of the lack of a recognisably ‘political’ identity regarding vaccination, the politics of VHR has been little understood, and experts acknowledge that not enough is known about the drivers of vaccine refusal or delay in specific geographical communities (National Vaccine Advisory Committee, 2015).

This paper aims to improve our understanding of VHR, particularly as it pertains to communities, by teasing out the identity politics associated with it. Through a critical
appraisal of numerous studies on vaccine-hesitant communities and individuals from throughout the developed world, we propose a unified theoretical framework for explaining how individuals’ decisions about immunisation relate to group identities. By “group identity”, we refer to the human tendency to think of our personal identities largely in terms of the groups to which we belong. By “groups”, we refer not only to people who interact with each other directly, but to people who share things in common—in this case, practices and beliefs about parenting and health—and who mutually recognise this commonality. We also use the term “groupness” in this article to refer to the dynamics described by social psychologists that operate between and within groups. As we will see, while groups of vaccine-hesitant people are often found in tight-knit geographical communities, they take comfort and inspiration from people who share similar beliefs all around the world, connected via the internet, with whom they feel a sense of kinship as an enlightened but besieged minority. Grounded in Social Identity Theory (SIT) and Social Categorisation Theory (SCT), the framework we employ in this article shows how the social context of vaccination puts choices beyond the realm of pure individual rationality. The decision to vaccinate or not is tied to how individuals view society and their place in it, the social groups they value, and the shared world-views of social groups they belong to.
In establishing group identities associated with vaccine hesitancy and refusal, we note that we are at risk of smudging together a collection of individuals who could be segmented in various ways that would draw out their differences. To even suggest that there is a “thing” called “vaccine hesitancy and refusal” might be problematic, since many hesitant parents still vaccinate, and not all refusers reject all vaccines (Chow et al., 2017, Gowda and Dempsey, 2013, Leask, 2011). Whether we consider the hesitant and refusers together or separately, there are still more differences in their demographic features, their locations across the developed world and within particular countries, and the driving factors behind their doubting or rejection of vaccines. Given this, can we legitimately write about Vaccine Hesitancy and Refusal (VHR) as a concept?

We believe that we can. We argue that VHR individuals of different stripes constitute distinctive tribes. There are various worldviews among these tribes, some of which are affluent and some of which reject materialism; some of which follow traditional religion and some of which favour non-traditional forms of spirituality. However, we suggest that all are formed in opposition to what they perceive as the damaging practices of modern mass society. While we engage broadly with this tribalism and its impacts, we largely focus upon a specific and distinctive cultural style – or tribe – associated with VHR in the developed world – one that places a particular value on ‘natural’ approaches to parenting, health and lifestyle, or what Kirkland (2012: 83) calls a ‘holistic health
ontology.’ People who adhere to this worldview value their own expertise and that of alternative health practitioners over mainstream medical and scientific expertise. They distrust what they see as unthinking deference to industrialised, commodified and financially co-opted medicine (Attwell et al., 2017), and do not believe that the vaccinating mainstream has any valid claim on them or their children. While not all of these individuals may disagree with the profit orientation of their societies, with social norms around achievement orientation, or with community participation, they do appear to hold specific beliefs around the damage of mass society as it pertains to the realm of health, and the health of their children in particular. When it comes to this, they seemingly do not aspire to acceptance from mainstream society; rather, they define themselves in opposition to it. As we show in our review of existing studies, manifestations of this cultural style can be found across many different geographic, national and class contexts. Although there are clearly distinctions and differences within it – sub-tribes, even – we believe that taking a meta-level view helps us to make sense of the politics therein. Relatedly and importantly, when we speak about the cultural style or tribe that we are focusing on – and attribute characteristics to it – we are talking at an aggregate level. Not every single vaccine questioning or refusing parent would fit this bill, and we do not pretend this is the case. However, in detailing and describing the tribe, synthesising the empirical evidence gathered by other researchers,
we need to use broad brushstrokes in order to render a picture that will be meaningful and useful to our readers.

Social Identity Theory (SIT) and Social Categorisation Theory (SCT) are our paint, providing a theoretical explanation for how strong group identities can form around shared lifestyle practices, and how these identities can make political conflict over issues like vaccination intractable. Providing an account of the identity politics of vaccination, we show the potential pitfalls of vaccination governance as governments wrestle with policy choices aimed at further increasing vaccination levels. Most recently in our home country of Australia, this has taken the form of ‘No Jab No Pay’ legislation. ‘No Jab No Pay’ builds upon a pre-existing requirement for children to be up to date with vaccination in order to receive the full rate of Childcare Benefit and the annual Family Tax rebate. (For readers outside an Australian context, these benefits function as ‘middle class welfare,’ are accessible to those well above the poverty line, and thus constitute a norm in mainstream society and an expectation for many Australian families. In this regard they could be considered broadly equivalent to policies requiring vaccination for school entry in all US states.) The new legislation removes the ability of vaccine refusing parents to access these same benefits via registering as Conscientious Objectors to vaccination (Parliament of Australia, 2015). This is broadly equivalent to California’s recent removal of personal belief exemptions
for school entry vaccination requirements (Bernstein, 2016). In both contexts, ‘hardline’ policies now mean that if you eschew vaccination – without a verified medical reason – you do not get to access public goods.

This paper proceeds as follows. First, we briefly sketch the background of VHR as a governance problem in developed countries. Second, we introduce the theoretical framework with which we will explain the underlying dynamics of ‘groupness’ found across disparate earlier studies of VHR. Third, we turn to a critical appraisal of existing studies, exploring how groupness manifests across different vaccination contexts, and the commonalities that emerge from them. Fourth, we work towards an overall theory of VHR group identity, focusing on the substantive content of the ‘tribe’ under study and how it is shaped by political conflict with the pro-vaccine societal ‘other’. Finally, we summarise our findings and their governance implications, suggesting new directions for research aimed at the goal of increasing rates of vaccination.

**Vaccine hesitancy and refusal in the developed world: a background**

The focus of this study is children who are unvaccinated due to lack of parental acceptance of vaccination, as opposed to lack of access to vaccination, which is a serious but separate problem (Beard et al., 2016). Researchers map vaccine attitudes on
a continuum, recognising a diversity of views and reasons for parental decision-making (Dube et al., 2013, Leask et al., 2012). Within the small population of children not up to date for acceptance reasons, complete vaccine refusal – the avowed rejection of all vaccines – applies to an even smaller cohort of children. The group that gains the most attention in the media—vocal ‘anti-vax’ activists who try to persuade others not to vaccinate—is a tinier subset still, and one that can be yet further divided into those who reject vaccination per se and mobilise on this basis, and those who may focus on vaccination as part of broader cultural or political struggles (Ward, 2016). ‘Vaccine hesitancy’ sometimes refers to parents who neither actively demand vaccines nor refuse all of them outright (Dube et al., 2013); in other scholarship the term is used to cover refusers too (Bloom et al., 2014, Gowda and Dempsey, 2013). In this article we are linking hesitancy and refusal together despite their qualitative differences, because we seek to draw attention to the politics and identification that underpin a disposition to engage in vaccine questioning, regardless of its eventual outcome.

Despite only a small percentage of Australian children not being up to date due to acceptance reasons, estimated to be around 3.3% (Beard et al., 2016), VHR remains problematic because of the impact vaccines have at a collective level. ‘Herd immunity’ for diseases such as measles is at around 95% (Pearce et al., 2008), meaning that this percentage of the population needs to be vaccinated to keep the disease out of the
community. Access barriers facing a separate cohort of parents leave policymakers with little margin for error in trying to attain the requisite coverage in any given jurisdiction; thus, parents refusing some or all vaccines matter. They matter particularly in communities where refusers cluster, and whose low coverage rates may be masked by higher overall averages (National Vaccine Advisory Committee, 2015). Moreover, continued stable rates of vaccination should not justify complacency; ‘compliance does not mean that people are happy with their decision’ (Rogers and Pilgrim, 1995: 14). Despite high rates of coverage, one-third of Australian parents are estimated to be vaccine hesitant (Leask, 2011); Gowda and Dempsey (2013) suggest a figure of one in four parents internationally.

Understanding vaccine acceptance, hesitancy and rejection has, thus far, been the task of public health and medical researchers. Researchers have tended to explore it as an individualised health problem rather than a governance problem. With rare exceptions, few conceptualise the social identities that inform vaccine decision-making. Yet approaching this issue from a governance perspective not only forces us to look at how disease prevention can fail in the face of adverse community attitudes, but demands that we look at what kind of politics develops and sustain these community attitudes.
Importantly, in addressing VHR, researchers are now moving past the ‘deficit model;’ an advance to which political science has contributed (Nyhan et al., 2014). The (now discredited) deficit model contends that if vaccine refusers can only be exposed to facts, they will change their minds (Leask, 2011). Scholars today recognise that the deficit model is itself a deficit; it fails to take account of our socially mediated acceptance or rejection of biomedicine (Kahan, 2014, Kata, 2010) and findings that information can actually entrench rejectionism (Nyhan et al., 2014). Some scholars are utilising the idea that people make vaccination decisions in the contexts of social identities, as we will elaborate below. The following section introduces Social Identity Theory and Social Categorisation Theory as the conceptual frameworks we will use for understanding the existing literature on vaccine hesitant groups.

**Social Identity Theory and Social Categorisation Theory**

As we will show below, literature on VHR has referenced groupness and used it as an explanatory factor. However, researchers have been understandably preoccupied with the contextual details of the groupness found in their studies. There has been no attempt to theorise groupness in relation to VHR in more general terms, which could be applied across a diverse range of social contexts. This is what we attempt to do in this section. The approach to groupness that we believe is most fruitful for the study of VHR is
Social Identity Theory (SIT), which incorporates insights from closely-related Social Categorisation Theory (SCT).

SIT posits that individuals see the social world in terms of in-groups and out-groups, develop favourable biases towards members of their own in-groups, and make judgments about others based on this in-group bias (Tajfel, 1982, Huddy, 2001, Brewer, 1999, Hogg, 2006). The experiments that formed the original basis of social categorisation theory showed that a powerful sense of groupness could develop even around small, arbitrarily manipulated differences between subjects in an experimental setting (Billig and Tajfel, 1973). Researchers have since extended the SIT framework to explain the dynamics of much larger and more persistent social groupings that help constitute individual identity in the real world (Huddy, 2001). This includes individuals forming opinion-based groups, which cohere around ideology instead of more tangible identifying markers (Bliuc et al., 2015).

The individual drive for self-esteem is central to SIT. Individuals enhance their own self-esteem by their association with highly valued groups. They are therefore motivated to regard their own in-group highly, and to favour other members of that group. Degradation of out-group members may be a further means of enhancing in-group, and thus individual, self-esteem. Brewer (1999) has argued that in-group love
does not necessarily entail out-group hate. However, SCT suggests that individuals will at least be motivated to accentuate perceived differences between members of their group and others, as a way of making sense of the world and their place in it (Tajfel and Turner, 1979, Kinder and Kam, 2010).

The tendency of individuals to see the world in terms of groups, to form strong group loyalties, and to enter into group conflicts has long been recognised as a constituent part of the social and political world. There are many ways of understanding this ‘groupness’ and SIT/SCT is only one of them, but as we will explain here, we believe it is the only adequate explanation in the context of VHR. Kinder and Kam (2010) identify SIT/SCT as one of four main theoretical approaches to the politics of ‘Us Against Them’. Other approaches include realistic group conflict theory, which posits conflict over scarce goods between groups as an enduring source of intergroup hostility; authoritarian personality theory, which sees ethnocentrism as a consequence of authoritarian-minded individuals projecting repressed and forbidden desires onto out-groups; and evolutionary psychology, which sees altruistic groupness as a trait that enables social groups to compete, survive and reproduce. Beyond these approaches, social science has also generated theories that emphasise the strategic construction of groups by political entrepreneurs seeking power, and of social groups as products of discursive formations or deeply embedded cultural systems (Fearon and Laitin, 2000).
We believe the SIT/SCT approach is the best-suited to explain the groupness around VHR for several reasons. First, SIT/SCT emphasises the contingent and arbitrary nature of group identity formation. Many other approaches tend to take the existence of groups for granted, and have arisen from studies of long-established ethnic, racial or religious formations. VHR is an historically recent phenomenon involving a groupness based on voluntary decisions around parenting and lifestyle practices. Explaining how a nascent group identity emerges and interacts with individual decision-making is a task particularly well-suited to an approach grounded in individual agency around group formation. Second, VHR has not traditionally been seen as ‘political’, despite the existence and emergence of organised campaigns by vaccine opponents, particularly in the United States and Australia. While theories about realistic group conflict and political entrepreneurship are well-placed to explain conflicts involving established political entities, SIT/SCT is much better equipped to show how individuals create new identities around issues that have not yet been recognised as political by the mainstream. Third, the emphasis of SIT/SCT on a link between individual and group esteem is well-matched to explain a context of identity formation in which individuals seek assurance in the virtue of their own decisions. Group identity in this context is grounded in the aspiration to belong to a positively valued group. Both vaccine-questioning and vaccine-accepting individuals identify themselves as among the wise.
While VHR promotes a self-image of hard-won expertise, available to some but beyond the reach of most in mass society, vaccine acceptance lends itself to tropes of majoritarian common sense, regard for others and ‘appropriate’ deference to scientific authority.

SIT / SCT therefore offer us a valuable analytical toolkit with which to elaborate VHR in developed country contexts. To date, no other researchers have attempted to do this. However, our predecessors have studied, framed and analysed VHR parents in ways that are very salient to the analysis we wish to undertake. In the next section, we critically appraise their work.

A Critical Appraisal of Literature Pertaining to Vaccine Hesitancy, Groupness and Social Identity

In the background above, we noted a recent shift towards scholars utilising group identities in their analyses of VHR. This section elaborates these approaches and explores the cultural attributes of vaccine refusers. Our purpose is to show that there is empirical evidence for a group identity pertaining to VHR which can then (in the following section) be understood from the perspective of Social Identity Theory and Social Categorisation Theory. We begin this appraisal with research that has discussed
groupness in general terms before moving on to case studies that have engaged with groupness in specific contexts.

The most influential researcher to employ groupness in the context of vaccination is American political scientist Dan Kahan, though his findings at first appear counter-intuitive. Looking at the United States, Kahan argues influentially that contentious public debate persists around many areas of scientific consensus because ‘[p]eople endorse whichever position reinforces their connection to others with whom they share important commitments,’ (Kahan, 2010: 296). Kahan’s extensive research on the effects of this ‘cultural cognition’, explores how entrenched political or religious beliefs in individuals can motivate resistance to scientific evidence. In areas such as climate change, or views on whether the disposal of nuclear waste is safe, people tend to accept or reject scientific evidence on the basis of whether it accords with the views of ‘their team.’ As a result, many areas of public debate on science in the United States are strikingly polarised even where the science itself is not.

In a 2014 study of Americans’ attitudes towards vaccination, Kahan finds evidence of cultural cognition at work, but importantly concludes that it operates very differently compared to other contentious scientific topics. Unlike disbelief in global warming, which is widespread in the United States and linked to clearly-defined partisan politics,
resistance to vaccination is relatively rare, and largely confined to enclaves outside the mainstream of American opinion. Kahan’s survey data suggests that overall acceptance of the benefits of vaccination are very high, with pockets of resistance in the population not linked to recognisable ‘cultural styles’ such as anti-government conservatism or anti-corporate leftism (Kahan, 2014: 46). Despite numerous media accounts identifying vaccine rejection as part of a broader distrust of scientific authority in the United States, along with disbelief in global warming and organic evolution, it does not, in fact, correlate with any broader ‘anti-science’ position, nor does it correspond to positions on other political issues linked to health risks, such as gun control, drug legalisation or sex education. Vaccination, Kahan therefore concludes, is disconnected from the broader politico-cultural cleavages that polarise Americans.

Kahan’s contribution is significant. We adopt his terminology of ‘cultural style’ in this article to refer to socio-political divides around beliefs and values pertaining to vaccination. He has also encouraged the field; below, we describe how another researcher has employed ‘cultural cognition’ to great effect. However, we argue that Kahan reached the wrong conclusion about his own concept of cultural cognition in the context of vaccination – necessarily, given the tools he used, and a limitation that he, himself, recognises.

This conclusion [that there is no meaningful degree of conflict between any of the groups that figure in recognizable conflicts over societal risks in the U.S.] certainly does not imply that
members of the small segment of the population who view vaccine risks to be high and vaccine benefits to be low share no identifying affiliations or related dispositions. But it does mean that their distinctive cultural style is necessarily a fringe one, and that the identification of them will evade the survey measures typically used to characterize familiar affinity groups in the general population. … (Kahan, 2014: 37)

Kahan adds that the ‘cultural style’ of vaccine refusers can only be found through ‘fine-grained and local’ studies. However, while VHR may not link to ‘known’ cultural cleavages, it may feasibly link to as yet ‘unknown’ ones that could still apply on a larger scale. This is our contention. As we show below (including through synthesis of fine-grained and local studies), stances on vaccination link to a complex array of views around birthing, parenting, nutrition and nature. We argue that a cohering ‘cultural style’ often travels with VHR, closely associated with distinctive practices and shared amongst parents who develop a strong sense of groupness. This groupness—which encompasses both in-group esteem and a sense of being under siege from a much larger out-group—gives political content to this nascent identity. Researchers may not discover it with existing tools used to measure political identities, but this is a limitation of their methods and samples. Kahan’s participants had an average age of 56, whereas the median parent of young children is much younger and may have other demographic and political differences. More importantly, Kahan might not have been asking the right questions. The literature we report below suggests that a new tool engaging with lifestyle practices could capture the fault-lines constituting vaccination identities, thereby validating ‘cultural cognition’ in the vaccination context.
Meanwhile, Sobo (2015) identified an appropriate community in which to apply the ‘cultural cognition’ framework. While Kahan did not believe that cultural cognition was occurring in a mass context, Sobo found it alive and well in a Steiner school community in California. Her study explicitly emphasises the social learning that occurs through peer networks, describing how parental interactions support normative understandings and reinforce favoured social ties. Sobo’s Steiner school was the kind of enclave that Kahan foresaw would need specific exploration; there, she found the cultural style that had eluded him. We argue that on a larger scale, it need not remain so elusive, and will subsequently suggest where else it can be found.

Before we address the location of the cultural style, however, it is important to show how other scholars have also provided evidence for vaccine decision-making occurring within a social context of group identity. The notion of vaccine behaviours being informed by the desire to get along with others, so central to Sobo’s employment of cultural cognition, was picked up in an earlier ethnographic study of mothers in Brighton, England. There, the context was a wider societal angst around a specific vaccine, but social processes remained central. Poltorak et al (2005) conceptualised ‘MMR talk’ as an unavoidable cultural conversation that unfolded amongst mothers of young children in the wake of Andrew Wakefield’s (fraudulent and subsequently
retracted) publication linking the combined vaccine for measles, mumps and rubella to autism spectrum disorders (Rao and Andrade, 2011). ‘MMR talk’ greased the social wheels of mothers’ interactions. With the vaccination status of the most famous baby in England up for discussion – then Prime Minister Tony Blair refused to confirm whether his son Leo would receive MMR – speculation regarding the vaccine’s merits formed a cultural moment (Meikle, 2013). A shared identity of new motherhood, whose valued practices involved providing support to others, exposed participants to the idea that vaccination was questionable, rather than recommended and unproblematic (Poltorak et al., 2005).

What people around us say about vaccination matters, as another researcher, Brunson (2013), discovered. Brunson used network analysis methodology to conceptualise ‘information networks’ and ‘people networks’ for her study participants in King County, Washington. The former were perceived by the subjects as the sources of information on vaccination to inform decision-making. The latter were, by contrast, those with whom they interacted, without explicitly viewing them as information sources. Brunson found that the attitudes of those in her subjects’ ‘people networks’ had more impact on their children’s vaccination status than the attitudes of those from whom they claimed to get information. Astonishingly, attitudes of ‘people networks’ were a stronger predictor than the subjects’ own characteristics and beliefs.
The groupness evident in these studies – and others – pertains to people orienting their attitudes based on those around them (Benin et al., 2006, Harmsen et al., 2013). While historically this has relied upon physical proximity or tangible relationships, the internet and social media have opened up avenues for geographically disaggregated individuals to connect around ideas and practices (Sobo et al., 2016). We have presented reasonable evidence that reliance on others in the group matters to vaccine decision-making, which was the first purpose of our critical appraisal of this literature. We can now turn our attention to our second purpose. These and other studies also enable us to populate a ‘cultural style’ of VHR, finding the elusive attributes that Kahan’s broad-scale study of existing socio-political attitudes missed. Using this literature, we posit that there is a recognisable identity to a central VHR tribe, referencing wellness and the pre-eminence of nature. After explaining research that validates this, we go onto explore how this identity is reliant on particular resources. These resources enable an emphasis on individualism, which can be recognised as further attributes of this identity.

There is evidence that one practice associated with VHR is complementary or alternative medicine (CAM). A Swiss study found ‘[r]efusal of basic vaccination was significantly more frequent among CAM-users [18.2%] than among non-users [3.5%]. The highest frequencies of refusal were reported by patients who consulted physicians
practicing herbal medicine, anthroposophical medicine or homeopathy’ (Zuzak et al., 2008: 714). Gaudino and Robison found that use of a chiropractor was a risk factor associated with parents claiming personal-belief exemptions to school immunisation requirements (2012). Benin et al found that having a trusting relationship with an influential homeopath or naturopath was an inhibitor to trust in the medical profession, underpinning vaccine decision-making (2006). Alternative health practitioners construct particular narratives about health, engaging with interventions free from the need for a scientific evidence base. They connect on a personalised basis using anecdotes and ‘natural’ therapies, occupying the vast space which large-scale, commodified and depersonalised Western medicine, with its cold data sets and blandly worded health recommendations, cannot fill. They provide an alternative epistemology, which is important for when one steps away from mainstream practice (Pedersen et al., 2016).

One experience particularly lending itself to stepping out of mainstream practice and the medical model is childbirth. Mothers seeking to reclaim agency gravitate to midwife-led births (Cheyney, 2008). Birthing outside the medical model has been linked to VHR; Rogers and Pilgrim (1995: 20) found a ‘desire for or history of low-tech births’ in their subjects. Midwives were mentioned spontaneously as information sources on vaccination in Kaufman’s (2010) study, and Gaudino and Robison (2012) found that alternative child birthing was a risk factor associated with personal belief vaccine
exemptions. While no literature directly explains the causal flow – do VHR parents seek out these birthing experiences, or do birthing experiences lead to VHR – a relationship is evident.

This can be elaborated by a studies describing a broader ‘worldview emphasising a particular view of the natural,’ which Poltorak et al (2005: 713) link to their Brighton mothers’ refusal of MMR, and which potentially links back to the use of CAM as well. Other ‘natural’ practices may also be implicated; a study of postpartum mothers found lower levels of trust in vaccination in mothers who planned to breastfeed (Wu et al., 2008). Rogers and Pilgrim (1995) also found a preference for extensive breastfeeding; breastfeeding’s reputation as a natural practice could explain proponents’ orientation away from ‘unnatural’ interventions like infant formula and vaccines.

The idea that natural lifestyles repudiate the need for vaccination is the subject of Eula Biss’s reflection (2014). Harmsen and colleagues (2013) cited ‘preventative’ practices including nutrition, a ‘peaceful basis for life’, breastfeeding and limited social interactions as proffered reasons not to vaccinate. Rogers and Pilgrim (1995: 25) observed a perception of vaccines as ‘modern trash’; refusers had ‘specific ideas about protecting children from disease and keeping them safe through diet and a ‘calm, loving environment.’ Reich (2014: 692) explicitly teased out how her mostly white, educated
subjects in California saw feeding as ‘key to both their mothering and health promotion practice,’ Breastmilk was seen as conferring immunity, and on this basis mothers quasi-rationalised refusing vaccines, even while implicitly recognising that vaccination might be appropriate for other children. ‘[E]fforts to manage nutrition generally’ were seen as ‘protective of… children’s health’, whether because the mother took supplements during pregnancy or fed her child organic food (Reich, 2014: 693).

This conditional ‘safety’ element references class, with Reich noting considerable inputs of time, energy and capital required to care for children in the manner facilitating her subjects’ quasi-rationalisation against vaccines. She sketches a ‘gated community’ in which vigilant (privileged) parents construct barriers between the ‘natural’ and the imposed, toxic world of mass society, perceiving that they can avoid vectors in mainstream settings like child care centres. This Us-and-Them ‘toxicity’ reasoning is not limited to the natural-living VHR tribe. A study of Orthodox Jews in North-East London shows how their membership of close-knit community, seeing itself as distinct from the outside world, influences their worldview and vaccine decision-making. Parents are so certain their children will not contract tuberculosis that rejection of the Bacillus Calmette-Guérin (BCG) vaccine attains the status of a ‘Jewish belief.’ The source of the Orthodox children’s ‘protection’ is their separation from ‘toxic’ Others:
We don’t have anything to do with other ethnic groups. We’ve only got to do literally with Jewish people. We don’t bathe together. (Participant 9)

I asked my friends and they were like ‘yeah well, they tell you to do it in Hackney because the area is maybe lower-class, … but in our circle we don’t have it. . .’ The same way we don’t have the issue of AIDS. (Participant 16)

(Henderson et al., 2008)

Unlike Reich’s subjects, the Orthodox Jewish parents may not be economically well off – the researchers note that a kosher lifestyle and private Jewish schools deplete resources, as, we would assume, do large families – but a stay-at-home mother constitutes a resource for ‘virtuous’ care, reinforced by communal insularity. This also applies to natural-living parents sacrificing dual incomes for stay-at-home parenting or homeschooling, which may explain why VHR parents are more educated than average but not always financially well off. Gaudino and Robison (2012) found that refusing families were likely to be older, poorer, less workers and more homemakers; Kennedy and colleagues (2005) found that parents opposing compulsory vaccination were likely to have lower incomes. However, Smith and colleagues (2004) found both high education and incomes were related to vaccine refusal, a correlation also emerging in Wei et al (2009). A significant under-researched cohort in Australia is high income refusers living in politically conservative communities (Corderoy, 2013), whose
inhabitants may not be eligible for middle class welfare and hence little is known about why their vaccine coverage rates are lower than the national average. Thus, we see possession of certain resources (either time, money, or both) as being necessary to making non-mainstream choices around vaccination, particularly as they pertain to being able to avoid ‘toxic’ Others.

However, neither wealth nor time are sufficient to generate VHR. Quasi-rationalisations about virtuous practices must further translate into a belief that, on balance, families are better off ‘going it alone.’ Former Chief Medical Officer of Britain, Sir Liam Donaldson recalled his observation of mothers discussing MMR in a focus group:

> With the middle-class mums, it was basically, 'We don't trust them … if we can get to France to get the single jabs, we will'. The working-class mums said: 'If it wasn't safe, they [officials] wouldn't be recommending it'. They were far more communitarian, saying if we didn't have it, then what is it going to do for all children?'… (Meikle, 2013)

A rejection of such communitarian reasoning is also evident in Sobo’s (2015) study of Steiner families. Rogers and Pilgrim’s (1995) subjects conceptualise vaccination as an ‘individual issue’ about which one should make up one’s own mind. To ‘live naturally,’ one needs the resources of money or time, as we noted above; only then can
one act and reason individually. This ‘me-first’ perspective provides a salient rationale for dismissing the impact on others, as highlighting the special and unique properties of one’s own child makes it hard to justify population-level interventions (see Gofen and Needham, 2015, 76; see also, Reich, 2016). Such individualism also lends itself to the individualised methodology of many studies, which may have obscured the groupness of VHR until recently. In addition, subjects in Sobo (2015) and Rogers and Pilgrim (1995) identify as critical thinkers. VHR parents see themselves reaching enlightened conclusions via personal investigation and analysis. Thus, individualism combines with critical thinking to produce an identity premised on a particular kind of virtuous behaviour.

This does not merely occur within individuals; the point is that these processes occur socially. Even the basic idea that vaccination is an ‘individual issue’ propagates socially (Rogers and Pilgrim, 1995). If we look back to what we call the ‘greasing of the social wheels’ in the Brighton study, it was socially important to validate others’ vaccination beliefs, even if they differed from one’s own views (Poltorak et al., 2005). When parents prioritised forming social bonds ahead of challenging misinformation, this left unsound arguments able to propagate through ‘MMR talk.’ This contributed to a crisis of vaccine rejection that reverberates to this day with developed-world measles outbreaks (BBC News, 2013). Through this specific example, we can see how social
processes can, in particular cases, spread VHR itself like an infectious disease. But the more important social processes for our purposes are those which pertain to the formation of two group identities in opposition: vaccine refusers and ‘the mainstream.’ We explore both these dynamics in the next section, where we employ social identity theory to explain how the qualities of VHR parents elaborated here come to function – through interaction, aspiration and conflict – as group attributes.

Towards a (Social Identity) theory of vaccine hesitancy and refusal

Above, we demonstrated how parents learn from favoured networks how to make socially salient vaccination decisions (Sobo, 2015). We orient towards those we think are like us, and to whom we aspire to be like, basing our decisions on their beliefs and attributes. Our argument is that vaccine refusers are not indistinguishable from others in every way except on the basis of their children’s vaccination status. Kahan’s (2014) study seemed to find this, but we suggest that he was not asking the right questions. We argue that vaccine refusers constitute a collection of tribes who share commonalities and differences, but can be characterised as defining themselves against a mainstream Other. Parents acquire membership of these tribes specifically through shared lifestyle practices and attitudes. For example, those with an orientation towards ‘the natural’ are more likely to consider not vaccinating as a possibility, because others in their milieu
have made that decision. Parents learn from other parents to question vaccines, and at times the wider mechanisms at work in social discourse aid this process, as we saw in the Brighton study, where validation was more important than vaccination (Poltorak et al., 2005). For those who become vaccine refusers, the virtuous ‘natural’ practices in which they engage act as a prophylactic to toxic society (including both infectious disease and the vaccines that seek to prevent it). Like residents of Reich’s (2014) ‘imagined gated community,’ they believe that they are parenting in a conscious and enlightened fashion. In rejecting expert authority, they exercise agency. They stand away from the mainstream, and defend their right to do so on the basis that they are making reasoned decisions about their own children.

Their position cannot stand, however, for those who style themselves as their opponents. Whilst parental refusal of vaccines is taken up as a problem to be solved by an array of actors from governments, medicine and civil society, a particular social identity coheres around being ‘pro-vax.’ Pro-vaccine activists proudly defer to medical experts on the basis of lacking this expertise themselves. It is not enough to make such decisions for their own families; pro-vaxers worry about the societal impact of the non-vaccination choices of others. In the name of society, pro-vaxers mobilise against non-vaccinators, whom they regard as not entitled to make choices based on purely individual reasoning. Pro-vaxers receive validation from acting in accordance with the
idea that society has a claim on people. Indeed, they explicitly make this claim of others who would demur.

Conflict emerges between these groups, and social identity theory tells us that this conflict strengthens the identities of both. With scientific evidence, government, Western medicine and communitarian reasoning on their side, pro-vaxers such as the ‘crusading’ Australian newspaper, *The Daily Telegraph*, depict refusers as dangerous and irresponsible. Through conflict, pro-vax activists acquire positive affirmation as protectors of society against a selfish, irrational Other. When *Telegraph* journalist Claire Harvey (2015) labels vaccine refusers ‘baby-killers’, she notes ‘I don’t want to win them over. I want them to feel ashamed of their own stupidity.’ Pro-vaxers castigate non-vaxers for failing to care for society, but this merely strengthens the latter’s perspective that they are acting virtuously outside of this ‘modern trash’ (Rogers and Pilgrim, 1995). Problematically, since individualism and critical reasoning themselves form part of VHR identities, they construct the ‘public’ or ‘mainstream’ as an abstracted social Other, comprising a site of contamination and a means of illegitimate coercion.

You know you are a small voice standing up against a brick wall, a brick wall without any intelligence …. It is a small voice against that sort of mass…

(Interview Subject, Rogers and Pilgrim, 1995: 17)
The non-vaccinating identity does not link its fate to that of ‘the herd;’ broader society is simply not a valued group in this context. Thus, it is not simply that quasi-rationalisations make sense, or cultural cognition informs the making of socially salient decisions. VHR is also about one’s own self-image in relation to groups to which one perceives oneself as either belonging or proudly oppositional. Vaccine refusers possess the social or economic capital to define themselves against the mainstream, and seek to act according to their own beliefs and desires. Whether following a natural lifestyle and questioning big pharma, or using wealth to insulate one’s family from child care, bad food and ‘the riff raff,’ VHR parents are able to separate themselves conceptually and physically from the rest of us. Current policy does little to address this, and current practices of targeting these parents may only strengthen their shared beliefs and righteousness. Vaccine communication experts recognise this (see Leask in Corderoy, 2015), but can do little to address the polarisation occurring. Understanding that both ‘sides’ have identities at stake that strengthen through conflict can provide some insight into why nobody appears to want to stop fighting. Through fighting, we affirm who we are. Unfortunately, we also widen the gulf between two competing bases for reasoning.

Discussion and Conclusion
In this article, we have argued that VHR constitutes social identities formed around shared worldviews and lifestyles, which are reinforced through inter-group conflict with pro-vaccine activists as proxies for ‘the mainstream.’ Having made this contribution, we now reflect on the key implications arising for future study and policy.

Firstly, we have identified important issues with regard to how VHR parents see the rest of us. Non-vaccinating subjectivity involves de-identifying with the abstract broader public to which the rest of ‘us’ belong. ‘I know a lot of people are brain dead’… [but] a lot of people want to learn what is going on and why, and they want to know about what decisions they are making’ (Interview Subject, Rogers and Pilgrim, 1995: 37). Non-vaccinators’ social identity is explicitly defined against a mainstream that does not mobilise in similarly salient terms; VHR subjectivity is more recognisable to ‘them’ than ours is to the (‘brain-dead’) ‘us’. Accordingly, there is a problem when vaccination professionals advance a parallel language and identification to that imposed (with rancour) by non-vaccinators. Using terms imported from biological science, like ‘herd immunity’, we create our own proximity to slurs like ‘sheeple’. How we conceptualise who ‘we’ are matters, and it is time to start examining this. With regard to language, replacing ‘herd immunity’ with ‘community immunity’ is a good start. The recent Australian Government replacement of ‘conscientious objectors’ with ‘vaccine refusers’ appears positive in avoiding externally validating perceptions of conscience against a
sadistic communal will. However, the proximity of this terminological change to a tighter mandate on vaccination via No Jab No Pay is likely to reinforce the internal perception of undue coercion.

It is worth reflecting on the implications of our findings for this new government policy of withholding benefits from vaccine refusers. The merits of No Jab No Pay are that it constructs a wider societal ‘Us’ that demands to be considered by all parents. It inhibits the purely individual reasoning that allows parents to conclude that only family-level decisions (and consequences) matter. Another strength of the policy is that it requires parents to confront the social and educational interests of their child. For those who are not strongly against vaccination but who may have delayed or refused vaccines because this was available to them without consequence (via the now-abolished ‘conscientious objection’), there will be a stronger impetus to pursue timely vaccination. This type of reasoning could equally be applied to those US states like California that have removed personal belief exemptions. However, from a Social Identity Theory perspective, No Jab No Pay and its equivalent ‘hardline’ policies in other jurisdictions accentuate the differences between tribes. They effectively create tiers of citizenship based on the decision to vaccinate or not, thereby crystallising vaccination as a social marker of identity and, by extension, morality. Even as No Jab No Pay captures some of the middle ground by swaying parents towards vaccination (and away from the loss of
economic benefits), it leaves the more extreme flank exposed, radicalised and entrenched.

This brings us to the chasm between individual and communal reasoning evident in this social conflict. When it comes to vaccination, society asks us to make a sacrifice of exposure to miniscule risk from vaccine injury for the good of ‘the group.’ High vaccination rates suggest that most of us are willing to do this; a systematic review found that benefits to others was a motivating factor for parents to vaccinate, with 37% of parents in the studies that quantified it listing it as their second most important factor (Quadri-Sheriff et al., 2012). With that review also finding evidence that some refusing parents do consider herd immunity in their decision-making, it may worth exploring how we can talk more saliently about the social bonds that link ‘alternative’ and ‘mainstream.’ A publicly funded research agenda that starts with explicitly testing whether our conceptualisations of social identity and social conflict play out in all VHR communities, and explores the contextual differences between them, would be another important step. Research questions explicitly engaging with language, identity, solidarity and community as they pertain to vaccination could also consider how communities themselves can revive communal reasoning. A grass-roots social marketing campaign initiated by one of us in Fremantle, Western Australia, explicitly hailed alternative lifestyles and social responsibility as part of such a project. The
campaign improved thoughts and feelings towards vaccination for a third of surveyed hesitant parents (Attwell and Freeman, 2015). Where might we go from here?

Finally, there is scope to reconsider existing prevailing wisdom on vaccine communications. Best practice sees vaccine communications pitched broadly to emphasise consistent high rates of uptake and acceptance (Hershey et al., 1994, Kahan, 2014) and seeks to avoid creating links between VHR and other social identifiers, lest this link generate a self-fulfilling prophecy (Kahan, 2014). The danger is that, for example, a long-term breastfeeding mother intuits that VHR ought to be part of her repertoire, because that’s what ‘people like her’ think and do. These are valid policy prescriptions, especially applied to the country as a whole, but recognising social identities in conflict might alter the appropriateness of ‘good news stories’ and ‘nothing to see here’ proclamations in certain contexts. Claims about high coverage rates simply do not apply in regions where the social conflict is most prominent; accordingly, those citing these rates cannot locally enforce broader social norms with credibility. Likewise, the long-term breastfeeding mother probably already intuits that she should be questioning vaccines, because the link between VHR and ‘alternative’ or natural lifestyles has already been reified by both ‘sides’ in the social conflict. If we are correct, and identities have been locked down in this context already, we might need to look at entirely new literatures on inter-group and even ethnic conflict. In these literatures, we
may find helpful communication strategies that are premised on – and can address –
people’s orientation to tribal groups.

References


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