the *culture* in which authoritative knowledge is constructed – to represent vaccination coverage, especially when seeking to understand the dynamics of vaccine hesitancy. Against the political and economic context within which vaccines are delivered, maternity carers like Mrs Susman felt they had good reason not to actively circulate pro-immunisation advice.

Vaccine hesitancies held by parents in Jewish Manchester usually centred around the fabricated and long-refuted claims that the triple-antigen measles, mumps and rubella (MMR) immunisation may be causally associated with autism (Wakefield et al. 1998). Mrs Susman considered this a lingering anxiety in Jewish Manchester because of the prominent place that the alleged dangers of the MMR immunisation once held in the public domain, which:

> Petered through the system to the Jewish community, but they're not up to date with it. They're still maybe ten years behind with what has gone on with the MMR. They're not up to date with the recent research that shows that MMRs are safe, well, *supposed* to be safe. (Emphasis added)

Although Mrs Susman notes that Jewish Manchester is not up to date with recently published research, this is not to say that public debates about health do not 'reach' the constituency at all. Advice and authoritative knowledge that is intended to counter vaccine hesitancies certainly do circulate through information sources that are viewed as approved and authoritative (such as *Zei Gezunt*, but also Haredi newspapers and lifestyle magazines, as well as independent Internet research). Mrs Susman appears to doubt the safety of the MMR vaccine despite the access she would have to current authoritative knowledge circulated by public health (through her maternity and infant care work). If Haredi Jews in the UK have a residual concern with the MMR vaccine then this should also be viewed in the broader context of their being a minority group in the UK, where reactions to the MMR controversy were widespread.

Some maternity carers also told me that a significant number of local parents continued to be convinced that vaccines were associated with autism and atopic or allergic conditions (such as asthma or eczema) developing in their children. Concerns relating to MMR safety (and the implications for uptake) are not specific to Haredi mothers in the UK, despite the general population not being insulated from flows of information in the mainstream media. Levels of MMR coverage have consistently struggled to reach those attained prior to the 1998 Wakefield affair, often triggering outbreaks of

FIGURE 4.2 Promoting vaccinations in international Haredi newspapers. Photograph by Thomas S.G. Farnetti. © Wellcome Collection. Published with permission.

measles, and the public distrust that underlies lower-level MMR uptake has also shaped responses to subsequent immunisation campaigns (see Stöckl 2010; also Thompson 2009). Lower MMR coverage and the implications for how childhood vaccination campaigns are viewed in England then suggests that the self-protective stance of the Haredim (which, according to Mrs Susman, makes them less 'up to date with the current research') cannot solely account for mistrust in the MMR amongst *frum* circles.

Negotiating Recommended Childhood Immunisation Schedules

Jewish mothers in Manchester often preferred to accept childhood vaccinations at their own pace rather than follow NHS schedules. Delayed uptake can be read as parents choosing to negotiate acceptance of vaccinations, and illustrates how parental vaccine decision-making is poorly understood when viewed in binary terms of 'compliance' and 'non compliance'.[40] Blanket representations of low-level of vaccination uptake or 'compliance' among Haredi neighbourhoods do not accurately reflect the *process* in which individual parents navigate child health decision-making.

Having a growing family led Mrs Tananbaum to change her views on vaccine acceptance over time as opposed to holding a static position on uptake. She recalled how she was exclusively breastfeeding

and caring for her firstborn son at home (instead of sending him to a communal nursery), which led her to delay uptake of primary vaccinations. Her process of vaccine decision-making later changed when caring for multiple children:

> My gut feeling is, 'he's not in nursery, so he's not exposed to other children and I'm still fully breastfeeding him. I think he's protected enough at this moment in time so I want to delay it until her own immune system is strong enough to be able to cope with the vaccines'. Whereas, with my second, I immunised her a bit earlier than my first because I was thinking my eldest is now going to nursery; he's coming home with goodness knows what and exposing it to our newborn. So it [her rationale that underlies vaccine decision-making] changes as the situation changes. Nothing is rigid.

Delayed acceptance of vaccinations must then be understood in relation to broader decision-making strategies surrounding child health and care. Mrs Tananbaum claimed that *frum* mothers delayed uptake because they apparently feared newborns are 'too young at six weeks to get a cocktail of vaccines', with some placing a greater value on exclusive breastfeeding as a conscious strategy of bestowing immune-protection during infancy.[41] Conflicting perceptions of 'protection' can be observed between *frum* mothers and NHS routine immunisations, particularly because preventive health interventions that are designed to guard the broader population by way of social immunity are perceived as potentially virulent to individual bodies. In advancing Esposito's (2015) notion, Haredi women can be understood as claiming exemption from the obligation to vaccinate according to the NHS schedule (and thereby possibly disrupting the protective circuit of social immunity), as an attempt to avoid what they perceive as a disruption to their own children's health and welfare. The view that routine vaccination schedules are a universal technique of protection is therefore not always an interpretation shared between the state and citizens (read: the targets of vaccination campaigns).

Parental assessments of their children's immune systems were common amongst the Haredi mothers I encountered. Mrs Kelner explained that the inclement climate in Manchester meant that she had to carefully decide when to accept childhood vaccinations, and delay uptake when necessary:

> Because the weather is so bad here I don't like them to have their jabs when they have a cold or when they are poorly of any sort, and it's really hard to get those months in. *I don't like the idea of giving them*

> *something that isn't good* when their immune system is down a touch. (Emphasis added)

Mrs Kelner viewed vaccinations as a possibly harmful – rather than protective – intervention, and vaccines had to be balanced against the climatic context of Jewish Manchester to avoid assaulting her children's immune systems. The decisions that these particular Haredi mothers formulate are similar to those observed in the broader UK population, where parents often view their children's immune systems as highly individual and 'at odds with a logic of vaccination among public health institutions premised on homogeneity' (Leach and Fairhead 2007: 46).

Trust in a Time of Conflicting NHS Advice

Past vaccine safety-scares in the UK prompted mothers in Jewish Manchester to cross-examine NHS advice by engaging with broader information sources and social networks. When reflecting on the experience of being a mother during the MMR controversy, Mrs Kelner told me:

> I didn't think we were treated fairly as parents. We were given conflicting information even by the government. The NHS didn't seem to know where it stood, and if you can't rely on those who are meant to be giving you the right information then what do you do? What do you base your judgement on?
> BK: Does this affect the way you see NHS health information?
> Mrs Kelner: In general no, when it comes to immunisations yes. I won't take it as written in stone, definitely not. I will chat it through with people or look it up online.

The perception that the NHS had allegedly failed to reassure parents during the MMR scandal has had the implication of breeding a continued mistrust in government recommendations concerning vaccinations, pushing Haredi parents such as Mrs Kelner to scrutinise health recommendations. Mrs Kelner's claim that the NHS and healthcare professionals were previously ambiguous in their position on MMR safety reflects the views of parents in England more broadly (Petts and Niemeyer 2004: 12).[42] Any evaluation of how Haredi Jews respond to vaccination campaigns should then consider their status as a minority group in the UK, which shapes both their trust in the state and its health authority.

The decision to 'give' vaccinations can involve a process of researching and negotiating the benefits and risks to the individual and social body, the latter of which can be seen to play a

significant role in parental decisions. One Haredi mother described the challenges involved in vaccine decision-making strategies, as the appreciated benefits are counterbalanced by their perceived toxicity:

> I think immunisations are extremely *toxic* and it's a very hard decision to know whether to immunise your children or not. I did give them immunisations but I would have preferred not to. I haven't researched this hugely, but I think that they contribute a lot of heavy metal poisoning in the body. Why take a healthy body and inject it with an outside virus? But I know that it can save lives, and I know that if my child caught measles and was exposed to somebody with a compromised immune system then it could kill the person if they caught measles. So it wasn't only for my children it was for the whole community. (Mrs Schmidt, emphasis added)

Mrs Schmidt acknowledged the benefits of childhood vaccinations but accepted her own children's vaccinations reluctantly. Thus 'compliance' with vaccination campaigns does not mean that parents accept them without any concern. The hesitation of this mother to vaccinate her child again echoes findings from the broader UK population, for whom consenting to vaccination does not equate with public trust in healthcare and the medical authority (Casiday et al. 2006).

Haredi mothers who delay uptake of vaccinations viewed themselves as employing a deliberate strategy to avoid administering a 'cocktail' of immunisations until their infants are relatively older and perhaps then more able to withstand preventive interventions that have the potential to be 'toxic'. In Mrs Tananbaum's case, this was carefully decided upon through her own analysis of risk and bodily protection. Views that the immune systems of children might not sit in accordance with NHS recommended guidelines are not specific to Jewish Manchester, and these concerns are not an issue of 'culture' or 'religious belief'. The views of these *frum* mothers instead resonate strongly with long-established anthropological debates, wherein 'accepting vaccination means accepting the state's power to impose a particular conception about the body and its immune system – the view developed by medical science' (Martin 1994: 194).

The decision to accept or refuse vaccinations is made by parents and imposed on their infants, the latter of whom bear the implications of contracting a VPD or any adverse reaction that could result in vaccine damage.[43] The decision not to vaccinate children is also

understood by parents as putting the social body at undue risk. Childhood vaccinations then become the point where competing risks and responsibilities intersect, entangling the bodies of the individual, the social and that of the nation.[44]

A minority of parents wanted their children to benefit from social immunity without having to vaccinate them, who Mrs Tananbaum described as being 'a little bit of a cheat'. The strength of social immunity rested in the willingness of individuals *to* vaccinate:

> A kid might not get meningitis because everyone else around him is vaccinated; they're just jumping on that free boat. Whereas I would question this lady and say, 'if no one else was vaccinated, would you still not vaccinate your kid?' So there's more chance that the child would get meningitis, whereas if everyone is vaccinated it's a very small chance that you would get it. (Mrs Tananbaum)

Ms Meyer was a local mother who defined herself as Orthodox Jewish. She objected to vaccinations for many reasons, and described how high vaccination coverage would (in theory) protect her non-vaccinated child:

> If ninety-five per cent of the population is vaccinated that means there's no chance of the disease [circulating] and then therefore the five per cent [that are not vaccinated] are protected anyway. So there's no need for the five per cent to be vaccinated if the majority vaccinate anyway. It's just common sense.

However, Ms Meyer's willingness for her child to rely on social immunity for protection indicates a partial appropriation of biomedical information (authoritative knowledge) when formulating her refusal of vaccinations. Coverage levels, as I discussed earlier, vary from place to place. Some Haredi neighbourhoods in London do not achieve the required threshold to confer social immunity, judging by outbreaks of VPDs (Public Health England 2016). When vaccination coverage is not constant across the country, protection circulates amongst those who are immunised but not those who claim exemption from the social immunity circuit. Whilst individuals like Ms Meyer appropriate biomedical knowledge to inform and justify opposition to childhood vaccinations, it is equally the case that she does not fully consider that her local context might not secure the required threshold of social immunity: the logic that her child might form the protected five per cent only works if vaccinations are accepted by the ninety-five per cent who comprise her neighbourhood.

Toxic Interventions and Adverse Reactions

Anxieties surrounding vaccine toxicity and the risk of bodily contamination informed the opposition of some parents in Jewish Manchester. Mrs Lisky claimed that vaccinations contained animal-derived cells, which she viewed as being a potential reason that her daughter was mute:

> My daughter is a bit autistic, she doesn't speak. The paediatrician asked if I was up to date with the immunisations and I said I wasn't giving her the last ones. She asked, 'why not?' So I said, 'I feel the MMR immunisation made her autistic'. She was very angry. They [medical professionals] were all very upset, she and some other people were shouting at me. I said, 'I know for a fact that they make it [immunisations] out of diseased flesh from dogs and cats and rabbits, and then they put it into the body. Not everybody can take dog flesh or aborted flesh; maybe there are sensitive people. Animals can't speak and maybe that's why my daughter can't speak'. (Mrs Lisky)

This Hassidish mother's opposition to vaccinations was embedded with grave concerns about safety and the potential for her daughter's body to not only be contaminated with animal matter – but for her to acquire non-human attributes from the method through which vaccines are cultured.[45] The possibility for human bodies to be contaminated or damaged by vaccinations that are cultured with animal-derived tissues was a concern for other mothers in Jewish Manchester, and further demonstrates how bodies were seen to need protection and fortification in ways that conflict with the public health philosophy of vaccines.

It is here where we begin to see contests over the guardianship of the body between the Judaic and biomedical cosmologies, the latter of which has been described as producing bodies in a powerful terrain of 'cultural and material authority' (Haraway 1991: 204). Anxieties surrounding the cross-species transfer of tissues demonstrate a permeation of embodied boundaries that is made possible by biomedical interventions. Through adverse reactions,[46] vaccine-damaged children are viewed as acquiring animal traits or what might be described as conceptualisations of the 'monstrous'.[47] Biomedical interventions that bring the 'external' into the 'internal' are refused as an attempt to protect and preserve the body in both its physically and socio-culturally constructed boundaries. The notion of 'immunity' then acquires a paradoxical meaning for this Hassidish

mother, as that which is meant to preserve life is counterbalanced by the potential to endanger it (cf. Esposito 2015). Indeed Ms Meyer and her family voiced outright opposition to vaccinations for similar reasons:

> Ms Meyer: You're injecting a healthy body with things that come from animals. That's what the injections are, and we're against that for moral reasons, to put that into your child.
> BK: What are your main concerns about immunisation safety?
> Ms Meyer: First of all its safety for sure, what if [interrupted]
> Ms Meyer's parent: It's cowpox, isn't it, vaccinations?
> Ms Meyer's sibling: I don't know what the ingredients are but I've heard various things, it comes from monkeys, it's lots of toxic drugs. It's a cocktail of stuff, you know, the ingredients, but yes that's the main priority and then is it actually kosher? I'm not sure that all the ingredients can be kosher.

The cowpox that Ms Meyer's relative had claimed vaccinations were derived from played a historical role in the development of vaccinations against smallpox rather than contemporary ones. These anxieties surrounding the safety status of vaccinations point to a partially appropriated and incomplete knowledge of the intricate process through which these biomedical interventions are produced and cultured.

Viruses for some routine childhood vaccinations are pharmacologically 'incubated' or processed using human or animal cell-lines (Oxford Vaccine Group).[48] Cell-lines have become a biomedical technique of culturing and immortalising life over short and continued periods of time, where human and animal tissues are extracted and grown independently of bodies for the purpose of mass-reproduction and the development of therapeutic interventions, including immunisations (Landecker 2007; Lock 2007; Lock and Nguyen 2010).[49] The initial trace of human and animal cell-lines are removed when being 'purified' intensively, which means there is no demonstrated risk of transmitting disease through the manipulation of animal cell-lines for the use of human vaccines. However, ethical issues remain in the fact that human cell-lines are derived from foetuses that were voluntarily aborted in the 1960s but continue to sustain the development of immunisations (see Oxford Vaccine Group 2018).[50] The concerns of Mrs Lisky should not be dismissed as conspiracy, since at the core of her refusal to not complete the course of childhood vaccinations is a complexly woven debate concerning the pharmaceutical manipulation of foetal and

animal tissues and the moral challenge this has raised for religious practitioners from a range of cosmologies.

Adverse and Averse Reactions

Opposition to vaccines was often described by parents as arising from what they considered to be past experiences of a 'side-effect' or an 'adverse reaction'. Health professionals are, in theory, mandated to log any adverse experiences to vaccinations in patient records.[51] Yet there was a concern amongst Haredi mothers that this does not always occur in practice, which can be viewed as one of the several signs of mistrust in childhood vaccinations and the medical establishment. When recalling her son's adverse reaction to the triple-antigen DPT vaccine, Mrs Kahn described how she felt healthcare professionals handled the situation and her hesitancies poorly:

> I spoke to the doctor about it, I said, 'look, it seems to me that my son had a vaccine reaction and I think it needs documenting'. And he said, 'Yes, we'll document it. Don't worry'. And he didn't. It bothered me. I said, 'it was clearly a vaccine reaction' because he was trying to persuade me that the statistics for having negative reaction were not that high, but the statistics if you didn't [immunise] were high, and using a lot of emotive language like 'I've seen children with measles in hospitals and if only you'd seen, statistically it's safer to give than not to give'. I said, 'but you've not recorded him as a vaccine reaction. If you've not recorded him as a vaccine reaction then how can you say the statistics are fair?' (Mrs Kahn)

What is interesting is that Mrs Kahn challenged the view that statistics were an accurate representation of vaccine safety, because she felt that her son's lived experience of an adverse reaction was being excluded from the process of constructing biomedical knowledge (which was presented to her as indisputable). Whilst Mrs Kahn told me how she confronted healthcare professionals on the issue of statistical transparency, other Haredi mothers did not formally report their children's experiences of adverse reactions. Mrs Dreer held particular reservations about the pertussis vaccine despite 'complying' with the recommendation from her GP, but her son subsequently experienced what she interpreted to be an adverse reaction:

> Mrs Dreer: I was very nervous about giving the whooping cough vaccine because I've heard stuff, and I said to the doctor, 'should I give it?' He said, 'you'd be a negligent mother if you didn't'. So I gave it, and he was so ill. He had a terrible reaction, *terrible*. I didn't

> get any support from the hospital at all. I said this kid is burning up with fever, had ulcers in his mouth. He was dreadfully ill. [Emphasis in interview]
> BK: So when you reported it to your [question interrupted]
> Mrs Dreer: They weren't bothered, they just said "don't bring him in, he'll just get iller [sic] in hospital."
> BK: Did you log the reaction?
> Mrs Dreer: No, no. I just told them about it [the reaction], but they weren't interested.

After experiencing what they saw as adverse reactions to routine vaccinations, these Haredi mothers often chose to delay or withhold vaccinations for subsequent children. Mrs Kahn, as mentioned at the beginning of this chapter, withheld all recommended vaccinations for her seventh, eighth and ninth children. Mrs Dreer delayed the age at which her subsequent six children received all recommended vaccines, but selectively excluded the pertussis vaccination.[52]

Mrs Kahn and Mrs Dreer both felt that healthcare professionals dismissed their concern that adverse reactions had occurred. Mrs Kahn, in particular, felt like healthcare professionals were treating her as a 'paranoid stupid mother who is just being ridiculous'. When I discussed the issue of vaccine safety concerns with a local *frum* GP, I was told that only a small minority were averse to vaccinations and they were allegedly 'just bonkers or people with bonkers ideas'. He went on to remark that parental anxieties could be attributed to 'crazy discredited research or there may be some *meshugenah* [Yiddish, crazy person] in the family who is against immunisations'.

One afternoon I accompanied Mrs Goldsmith as she visited a nearby Hassidish neighbourhood to promote an upcoming ladies' health event arranged by *Gehah* (Chapter Two). When she approached Mrs Lisky with a flyer, the two soon became engaged in an awkward stand off. The Hassidish mother challenged Mrs Goldsmith on the perceived risks of vaccinations, who then responded by asserting the status of her role as a healthcare professional to counter the claims. Meanwhile, I stood nearby not knowing what to do, but seized the opportunity to meet with Mrs Lisky and discuss her anxieties in greater depth.

When we met a few days later, Mrs Lisky expressed her concern with the willingness of healthcare professionals to promote childhood vaccinations without actually being able to explain the process of the vaccine's production. The contradiction she saw subsequently fuelled her mistrust in vaccine safety, but also in the nexus connecting the state, the health authorities and the pharmaceutical industry:

> I asked the top paediatrician who has been working here [local hospital] to tell me exactly what was inside injections and she didn't know. All she said was, she was told that it was safe so she knew it was safe. She didn't know it herself. How can you just believe people when you are putting things into tiny babies? It is top *secret* what they put into it. They want to make sure that everybody gets it [immunised] and they get their money. They aren't telling you that it is safe [because] they can't know that it is safe. (Emphasis added)

These Haredi parents viewed vaccinations with suspicion because of conflicting positions on authoritative knowledge and transparency: whilst they accepted the potential for vaccinations to cause adverse reactions and damage to their children, they claimed that physicians did not. The process through which authoritative knowledge concerning vaccine safety is produced and presented to parents underlines this issue of public confidence, as several mothers in Manchester interpreted the information they received with varying degrees of mistrust.[53]

The safety concerns held by Haredi mothers in Manchester accord strongly with previous explorations of vaccine confidence and trust in the government, as well as medical and public health authorities. A past study conducted in England found that a significant number of parents (who refused the MMR) felt that healthcare professionals were quick to dismiss their anxieties regarding 'side-effects' or adverse reactions, with parents often trusting their own family doctors to take concerns more seriously than the medical establishment as a whole (Casiday et al. 2006: 183). Moreover, as has been explained elsewhere, public confidence in vaccinations is vital to secure sufficient coverage for social immunity, and vaccine hesitancies might be alleviated if parents were more aware of the existing processes for surveying the safety of pharmaceuticals and official lines to report adverse reactions (see Casiday and Cox 2006).[54] Not being seen to record adverse reactions presented by parents can run the risk of fuelling speculation that serious incidences are being 'overlooked, or even worse, covered up by the medical establishment' (Casiday 2007: 1067).

'Power of the Mouth'

Some Haredi locals in Manchester would circulate advice contrary to public health opinions, particularly recommendations to avoid certain vaccinations because of the perceived risks and toxicity. Mrs Lisky told me:

> Mrs Lisky: Today I had an argument because somebody went to have a rubella injection and I said to her she shouldn't go.
> BK: You advised her not to go for the immunisation?
> Mrs Lisky: Yes, because a lot of people who have the rubella immunisation still have low immunity … and there is a very, very, small risk of having rubella when you are pregnant because most people don't get it and certainly not when you are pregnant. It happens to one in a million people.

Although Mrs Lisky is perhaps correct in alluding to the fact that rubella (also known as German measles) is a rare condition in the UK, the overwhelming reason why rubella is not widely circulated is because of high MMR coverage. Low circulation, however, cannot always be taken for granted because, as mentioned, vaccination coverage varies throughout the UK.[55] Rubella is a highly contagious viral infection that is relatively mild, but can have serious implications if contracted by a pregnant woman. Vaccinating children against rubella, therefore, has less to do with protecting the body of an individual and more with the body of the nation, and how this is reproduced. Congenital rubella syndrome (CRS) occurs when the infection passes through the placenta to the foetus, and can result in pregnancy loss as well as acute foetal disabilities, especially during the first ten weeks of pregnancy.[56] Whereas pregnant women are routinely offered a blood test to check for rubella immunity as part of NHS antenatal care (usually at the eight to twelve week stage of gestation), some Hassidish women evade these initial antenatal screening services (Chapter Three).

Vaccine safety concerns are circulated by the 'power of the mouth' in Jewish Manchester, as one participant put it.[57] Yet vaccination campaigns and public health interventions will not be successful without addressing the anxieties held and shared by intended beneficiaries. The tendency to frame public opposition to preventive interventions, such as vaccinations (measured by low uptake), as arising from 'apathy' or a 'misinformed culture' (such as Oldstone 2010: 9) fails to grasp how antipathy is often rooted in safety anxieties and quests of bodily protection. Vaccine hesitancies in the UK more broadly (and their circulation through the 'rumour mill') reveal intense mistrust of government recommendations relating to science and technology, even amongst parents who otherwise cautiously accept vaccinations (see Cassell et al. 2006; Poltorak et al. 2005). Rather than dismissing rumours that are circulated among minority groups, public health authorities should attempt to understand the underlying causes of mistrust and local contentions that

provoke immunisation anxieties, such as those held and proliferated by Mrs Lisky.

Consulting and Circumventing Rabbinical Advice

The importance with which the preservation of health and *pikuach nefesh* is viewed in the Judaic cosmology means that some Haredi parents approach local *rabbonim* with a *shailah* concerning vaccinations,[58] especially if they have concerns over safety or had previously experienced what they considered to be an adverse reaction (Figure 4.3). Rabbi Levy leads one of the Hassidish constituencies, and locals from across Jewish Manchester (including those who are not Haredi or not observant) solicit his authoritative guidance and rulings. Mrs Kahn regarded him as 'an extremely holy man', and described how she approached him with the question of whether to accept vaccinations for her children.

Rabbinical authorities are often consulted in healthcare-related decisions, and their guidance is considered binding (Chapter Two). The particular rabbi who Mrs Kahn approached had apparently said it would be in her interests to consult a *frum* Jewish physician who would still have that 'health perspective' to hear and allay their concerns. She then committed herself to acting on his ruling:

> I had to take the view that if I've gone to ask then I have to abide by what he's saying. I really do. So I took them [her children], except for the young man who had the reaction [to the pertussis]. I didn't do [immunise] him then. I was too scared, I really was. So I did the rest of them, I did the whole vaccine programme and got them all up to date. I left him, I just couldn't bring myself to do it. (Mrs Kahn)

The contractual agreement which consulting a rabbinical authority involves, underlined the reason why Ms Meyer was hesitant to solicit an answer on the specific issue of vaccinating her child. Yet she was partial to procuring rabbinical guidance if she could circumvent any obligation to act on the authoritative advice given:

> Ms Meyer's relative: The thing is, if you ask him [the rabbi] a question and you want a *psak halachah* [judgement of rabbinical law] and you're not going to follow it, there's no point in asking because if a rabbi did say 'you have to vaccinate', we wouldn't vaccinate. There are lots of issues, well we feel it's religion too, but we haven't investigated that as in depth … as the moral, or the safety. The

> issue, you know, we haven't really examined it from the [religious/ *halachic*] point of view. There are things permitted in *halachah* that we wouldn't do.
> Ms Meyer: I thought about it, but if you ask him and he says, 'you have to', then you really have to follow it through. Don't ask if you can't do it. We could find out what he feels about it in a *roundabout way* without asking him directly 'what should we do', we could get somebody else and if we find out that he's open minded then we could approach him. It's worth thinking about, but in a roundabout way, so that way we don't have to do what he says if we don't agree with it. (Emphasis added)

Thus Ms Meyer's inclination to obtain rabbinical advice in a circuitous way indicates how the *rulings* of religious authorities might be less sought after than their *views,* particularly if this is to reinforce their individual oppositions to vaccinations. The family viewed *halachah* and rabbinical authorities only as a possible source of consultation, particularly if this could reinforce their current objections to immunisations.

Previous studies have illustrated that Haredi Jewish women often look for specific qualities in the rabbinical authorities they consult regarding biomedical interventions, such as their being an accurate interpreter of the Torah or *halachich* law (Coleman-Brueckheimer, Spitzer and Koffman 2009). However, it might also be the case that such rabbinical authorities are selected for their potential to be amenable to the concerns presented, and that people might even consciously evade rabbinical figures who hold a contrary opinion.

Media coverage of vaccinations in the UK *Jewish Chronicle* recently pointed to collaborations between Haredi religious and public health authorities, with the former agreeing to endorse immunisations in their constituencies in response to rising incidences of measles (see Kolirin 2017; Winograd 2013). Yet rabbinical endorsement of healthcare delivery strategies does not necessarily mean that Haredi Jews themselves will be convinced of the need to act accordingly (see Coleman-Brueckheimer and Dein 2011).[59] Public health discourse that represents Haredi Jews as being 'non-compliant', 'resistant' or 'hostile' to preventive health services does not fully account for the complex terrain that religious authorities and parents themselves navigate when dealing with vaccinations. Haredi individuals evidently do not always respond with 'compliance' to the dictates of religious authorities, which underlines my broader argument that Haredi Jews should not be reduced to a monolithic 'ultra-Orthodox community'.[60]

FIGURE 4.3 Authoritative knowledge. Photograph by Thomas S.G. Farnetti © Wellcome Collection. Published with permission.

Discussion

This chapter has critically engaged with the 'hard to reach' trope that has been imposed on Haredi Jews, by exploring how immunities are a social construction within which contrasting ideas of bodily protection are at play. While the state views social immunity as a technique to protect the body of the nation against the threat of infectious diseases (as well as 'contagious communities'),[61] the survival of the Haredi social body is made possible by maintaining *immunity* from the external world and its potential dangers – which can include areas of healthcare. By applying Esposito's (2015) conceptual analysis to the 'hard to reach' designation, it can be inferred that the Haredim are framed in public (health) discourse as claiming *immunity* from the citizenly obligation to accept immunisations and protect the body of the nation – which, in turn, disrupts the reciprocal circuit of social immunity (or *communitas*).

Vaccinations are a lauded public health and protective intervention used to arrest the transmission of certain infectious diseases at a population level. Haredi parents in Manchester prefer to negotiate uptake at an individual level; vaccinations are accepted broadly but cautiously, selectively and on their own terms to avoid danger or

harmful assaults on the immune systems of children. Portraying opposition to vaccinations as being an issue of 'culture' or 'religious belief' fails to grasp how responses to health services (that to do not adopt the desired manner of 'compliance') may result from a contest of guardianship and protection over the body and soul, which also intersects with constructions of risk and bodily damage. Only a minority of the *frum* mothers in Manchester opposed immunisations on the grounds of cosmology, although they would mobilise their interpretations of Judaic teachings to underscore their decisions. Vaccine hesitancies based on safety concerns might occur across the UK, but in Jewish Manchester the process and influences on vaccine decision-making can take on nuanced forms. While public health discourse and studies are quick to claim that there is no religious or *halachic* basis for Jews *not* to vaccinate their children (such as Stewart-Freedman and Kovalsky 2007), the concerns held by Haredi Jews in Manchester were overwhelmingly about safety and parental responsibility to protect their children.

Mistrust in vaccine safety as well as the state–NHS–pharmaceutical nexus often led *frum* mothers in Manchester to negotiate routine vaccination schedules rather than refuse them altogether. Haredi Jewish parents in Manchester do not accept childhood vaccinations without careful consideration of the risks they can present, which demonstrates how 'compliance' with health interventions is not an indicator of the extent to which parents trust Public Health England or the NHS to care for Jewish bodies. The MMR jab became a particular source of angst for *frum* mothers, and in this respect the Haredim are comparable to the broader non-Jewish population in the UK (see Cassell et al. 2006; Casiday 2005, 2007; Gardner et al. 2010; Petts and Niemeyer 2004; Poltorak et al. 2005). The issues that underlie Haredi responses to childhood vaccinations should therefore be discussed in the context of their being a minority group in the UK, as opposed to being a minority group with religious 'beliefs' that are obstructive to public health services.

Haredi minority groups emerge from this discussion as a group unfairly stigmatised as 'hard to reach' in the context of vaccination coverage and the target of intervention, probably because they tend to live in a particular geography rather than being dispersed throughout the state (as others who object to vaccinations might be, and as national variation in vaccination coverage indicates). Being portrayed as 'hard to reach' evokes a historical issue of positioning for the Haredim of Manchester. The juxtaposition of archival and ethnographic material in this chapter further demonstrates

how Jews in England have been the particular targets of public health debates and interventions in ways that are contiguous over time, which should not be ignored in current representations of the Haredim.

Notes

1. Mrs Kahn recalled that her son was administered the triple-antigen DPT vaccine in the early 2000s, though protection against these conditions is now offered in a six-in-one vaccine (see Appendix for current NHS childhood vaccination schedule).
2. Immunity, as expressed previously in this book, is a reaction (or intervention) to protect the body of the nation and its attempt to resist or incorporate foreign bodies, which Esposito (2015) frames as central to biopolitics.
3. Not all VPDs work according to social immunity (such as tetanus). VPDs require particular thresholds of social immunity. The threshold for measles, for instance, sits at 90–95 per cent, whereas rubella needs approximately 82–87 per cent of the entire population to be vaccinated (Milligan and Barrett 2015: 313).
4. Coverage 'is defined as the number of persons immunised as a proportion of the eligible population' (see Health and Social Care Information Centre 2014: 14).
5. Measles, mumps and rubella (MMR) coverage in England (2013–2014) for children reaching twenty-four months of age was 92.7 per cent (Health and Social Care Information Centre 2014), which falls short of the threshold of 95 per cent advocated by the World Health Organization (WHO). Whereas 59 out of 149 local authorities in England reached the threshold MMR coverage of 95 per cent and above, 68 varied between 90–95 per cent, and 40 local authorities failed to reach 90 per cent; two of which recorded coverage of less than 80 per cent (Health and Social Care Information Centre 2014). Coverage of all routine childhood vaccinations in 2013–2014 (when measured at one, two, and five years of age) was lower in England than all other countries in the UK (Health and Social Care Information Centre 2014). The stark variation in coverage across the UK in recent years raises the question of how responses to vaccination campaigns among 'hard to reach' groups compare with parts of the broader or 'general' population.
6. It has been argued that the term 'herd immunity' can be counterproductive for social groups who defined themselves by 'going against the herd' and leading an 'alternative' lifestyle which challenges the status quo (Sobo 2015: 395). For an example of 'health protection target' see Petts and Niemeyer (2004: 8). See Sobo (2015) for an example of 'community immunity'.

7. 'Social immunity' also appears in Leach and Fairhead (2007: 5), but with no elaboration on how the authors interpret this term.
8. As Larson and colleagues (2011) note, vaccine decision-making is influenced by a diverse range of factors, which need to be taken into consideration by those responsible for public health delivery strategies.
9. For examples of studies that discuss or attribute low vaccination uptake in relation to 'cultural factors' or 'religious beliefs', see Lernout et al. (2007); Lernout et al. (2009); Top (n.d.); Wineberg and Mann (2016).
10. International public health studies present conflicting reports between religious motivations and objections to vaccinations amongst Haredi Jews, with this being observed, for example, in Haredi settlements in Israel but not in Antwerp (Lernout et al. 2009; Muhsen et al. 2012).
11. Global health and media discourse widely circulate the view that Nigerian Muslim groups are resistant to international public health interventions because of antifertility anxieties, yet anthropological research demonstrates how parental objections in the context of Nigeria are actually much more complex than this single explanation suggests. Attributing vaccine refusal solely to antifertility anxieties obscures the broader concerns of safety held by parents as well as their feelings of being disenfranchised by top-down government interventions (Renne 2006, 2009).
12. See GB127.M182/3/1: 1871–1872; also 1875–1876; M182/2/: 1877–1878; M182/3/2: 1887–1888.
13. It can be inferred that the Board had to report incidences of particular infectious diseases from a Medical Officer Report 1893–94, 'the poor were singularly free from infectious disease necessary to report to the authorities' (M182/3/3).
14. 'Children of every recipient shall receive instruction, or else relief is suspended' (see M182/3/1: 1874–1875). This illustrates how ambitions for anglicisation were fixed on the children of immigrant parents through educational policies, which had the hope of 'raising them in the social scale'.
15. Also *Matzot*. Unleavened bread, which Jews are mandated to eat over *Pessah* (Passover).
16. GB127.M182/3/1: 1876–1877.
17. GB127.M182/3/2: 1887–1888.
18. As demonstrated by European colonial history, including the French colonial occupation of Cambodia (Ovesen and Trankell 2010).
19. The strategies of health surveillance conducted by the Jewish Board of Guardians should be understood in its own submissive position to state authorities, and its own ambitions of anglicising 'foreign' Jews.
20. The UK sits in the WHO European region, which forms one of the six regional WHO offices. See WHO Regional Office for Europe (2013); European Centre for Disease Prevention and Control (2015) for further

information on measles and rubella distribution and elimination in Europe, and failure for reaching the 2010 and 2015 targets.

21. For examples of the language styles used to frame Haredi Jews and 'hard to reach groups', see Ashmore et al. (2007) and Cohen et al. (2000). For similar examples in the context of Israel, see Anis et al. (2009) and Stein-Zamir et al. (2008).
22. Emblematic of Foucault's aforementioned concept of 'governmentality', populations (and particular groups within a population) are cultivated and constructed as defined targets of subjugation and control, especially through institutions of surveillance, such as public health.
23. For examples of the language used to frame Haredi Jews, see European Centre for Disease Prevention and Control (2012); Henderson, Millett and Thorogood (2008); Lernout et al. (2009); Local Government Association and Public Health England (2013); Public Health England (n.d.); WHO Regional Office for Europe (2013, 2016).
24. Debates about compulsory vaccinations raise ethical questions about individual versus collective rights to protection. As Petts and Niemeyer 2004:9) note, 'compulsory immunization of an individual may be regarded as unethical. However, given the public good component of vaccination, so too may a decision not to immunize'.
25. Prevention of vaccine-preventable disease cannot be sustained without a culture of immunisations, indicating how this public health intervention forms part of a 'technocracy' (Leach and Fairhead 2007). Here, various techniques are deployed to increase 'compliance' or 'uptake' and have the ultimate aim of 'instilling vaccination as a habit, and inculcating a desire for it' (see Leach and Fairhead 2007: 9).
26. Jewish Manchester experienced an outbreak of measles in 2000 (in the aftermath of the 1998 MMR debate) largely because of a low MMR coverage by two years of age, falling short of the regional and national average (Cohen et al. 2000). However, Cohen et al. (2000) do not discuss the reasons for low acceptance of the MMR vaccine. Greater Manchester (including its Jewish settlement and the broader population) later experienced a prolonged outbreak of measles from October 2012 to September 2013. A large proportion of the 1,073 suspected cases of measles were observed in children and youths aged ten to nineteen, this group was reported as having low uptake of the MMR because of previous (and falsified) claims that the triple-antigen immunisation was causally associated with autism (see Pegorie et al. 2014).
27. See Baugh et al. (2013); Loewenthal and Bradley (1996); Purdy et al. (2000) for the former. See Cunninghame, Charlton, and Jenkins (1994) for the latter.
28. This study should be viewed in its historical context, being published before the controversial (and falsified) claims by Wakefield et al. (1998). Andrew Wakefield, a British gastroenterologist, was the lead author of

the 1998 *Lancet* article that claimed the triple-antigen MMR vaccine may be causally associated with autism. The controversy sparked widespread vaccine hesitancies and public distrust of the MMR vaccine, resulting in lower-level uptake across the UK with coverage levels falling short of social immunity thresholds. The research underpinning the 1998 article was highly flawed and in 2010 *The Lancet* formally retracted the article, and Wakefield was struck off the medical register by the GMC.

29. See Wineberg and Mann (2016: 4), who relay how the 'NHS thinks Jewish community fears immunizations, when majority of parents cooperate'.
30. See Cohen et al. (2000); Lernout et al. (2007); Lernout et al. (2009); Stein-Zamir et al. (2008); Stewart-Freedman and Kovalsky (2007), also Baugh et al. (2013).
31. Extrapolations between Haredi groups in Israel and the UK should be viewed with caution. It is widely accepted that particular Haredi minorities in Israel (such as the Satmar and Neturei Karta) do not recognise the authority of state institutions, which might underline their lower levels of immunisation uptake compared with other Haredi groups (see Stewart-Freedman 2007). These state–minority relations are specific to Israel due to opposition to Zionism, and neither Haredi nor Hassidish parents in Jewish Manchester described such anti-establishment views in relation to vaccine-decision making. It is also essential to bear in mind that relations between some Haredi minority groups and the Israeli State are fraught and fractious, with public health authorities viewing some Haredi Jewish groups as being apathetic 'toward preventive healthcare measures' and as responding with 'hostility toward services provided by the public health system' (Anis et al. 2009: 256). It has therefore been claimed that outbreaks of infectious disease require a 'culture-sensitive approach', especially among groups such as the Haredim, who experience 'implicit or explicit stigmatisation [… and] are judged as being difficult to treat and obstructive to the ingress of public health personnel' (Stein-Zamir et al. 2008: 3). Contentions and confrontations in Israel that entangle the Haredim with the body of the nation extend beyond healthcare in to other areas of civic life such as military drafting and political autonomy.
32. *Zei Gezunt* (a pseudonym) is funded by a local health authority and produced by a Haredi organisation, which claims, among others, to be representative of the Orthodox Jewish population in Manchester. It is typically delivered to homes with a *mezuzah* (an encased parchment from the Torah) attached to the doorpost, signifying that Jews lived in that house.
33. *Posek* (sing.), *poskim* (pl.). One can approach a *posek* or rabbinical authority for a *psak halachah* (judgement of law).
34. Rabbinical interpretations of medical risk and danger are central to how *halachic* rulings on vaccination acceptance are formulated, for

'medical science is key to the religious determination' (Turner 2017: 2). This chapter instead focuses on how parents engage in vaccine-decision making based on *their own* interpretations of vaccine risk, rather than the risk analysis of religious authorities.

35. US-based lifestyle magazines and newspapers catering to *frum* and Haredi Jews published a range of articles on vaccinations in 2015 following the US multi-state outbreak. These magazines and newspapers were nuanced in how they addressed issues from social, political and international events, but were not considered acceptable by all Jewish locals in Manchester. The magazines and newspapers were widely available in Jewish Manchester, demonstrating the flows of communication around health issues (Figure 4.2).
36. Chabad Lubavitch are actively involved in missionary work to increase religious observance amongst Jews, but not to attract non-Jews to Judaism (see Dein 2004). The pamphlet is intended to circulate Chabad interpretations of religious and philosophical teachings.
37. 'As for the question of vaccination, etc., which you would require if you make the trip [to Israel] in November, there is no basis for any anxiety in that respect', Chabad Lubavitch *L'Chaim* (issue 855, 23 May 2014). This article was likely written in response to traces of polio discovered in multiple sewerage sites in Israel and the Occupied Palestinian Territories, prompting Public Health England to promote polio immunisation amongst travellers to these regions (Public Health England 2013a).
38. Mrs Tananbaum clearly views vaccinations as an essential area of child health and a religiously binding conduct, but I later discuss how she preferred to negotiate the point at which her children were vaccinated (as opposed to refusing routine vaccinations altogether).
39. Not all Haredi parents in Jewish Manchester were convinced of the efficacy of this centre for disseminating child health and development messages to the constituency. Mrs Albala, who described herself as being 'at the bottom end of the Haredi spectrum', was sceptical of whether health communication was reaching Haredi parents via the Centre, who instead viewed it as being used as a 'cheap baby-sitting service'. Moreover, the local NHS health visitors who serve the in-house baby clinic were seen to be used only by parents occasionally, 'when they need to use the health visitors, they do the odd injections but otherwise no. What it is meant to be, is not what it is getting used for'. I was also told that many Hassidish mothers did not view this centre as an acceptable space for their children.
40. The term 'underutilisation' has also been used to describe parents who delay or refuse vaccinations (Muhsen et al. 2012), but I would instead argue that delaying the stage in which vaccines are accepted does not mean they are under-utilised, but utilised according to the judgement of parents.

41. What is also interesting is the language that Mrs Tananbaum used to describe her son's immune system (as needing to be fortified). When depicting an image of battling entities that are far removed from her child, Mrs Tananbaum can be understood as internalising and assimilating biomedical discourse of immune responses in her perception of the body (cf. Martin 1994).
42. Parents across England have viewed information provided by the government, public health authority, or healthcare professionals with distrust or as being conflicting (see New and Senior 1991; Evans et al. 2001; also Casiday 2005; Gardner et al. 2010). The view that parents received conflicting information surrounding the MMR can be situated in a broader socio-historical context in the UK, when 'public trust in government pronouncements on science and risk had already been severely tested' (Stöckl and Smajdor 2018: 242).
43. I use the term vaccine damage as a reflection on the UK Government's 'vaccine damage payment', which offers compensation if severe disability occurs following a vaccination.
44. It is here that we see most clearly how 'the interplay between individual-level and population-level risk highlights a point of tension in society between state public health interests and the individual "right to choose"' (Casiday 2007: 1067–1068).
45. Mrs Lisky's concern for cross-species contamination can be situated in a historical context of vaccine opposition. Formative vaccinations to prevent smallpox attempted to induce immunity through the animal-to-human transfer of cowpox matter, which was a socially contentious yet politically mandatory intervention in eighteenth and nineteenth century England. The reasons underlying resistance included the anxiety that transferring cowpox matter to humans could result in contamination with zoonotic diseases. The 1853 Compulsory Vaccination Act (applying to infants) instituted in England came to be viewed as 'political tyranny' by the working class, giving rise to a fierce anti-vaccination movement which resisted the institutionalised sanctioning of physical and spiritual contamination through 'blood pollution' (Durbach 2000). Anti-vaccination material at this time reproduced these concerns by featuring vaccinated humans growing cow heads or bovine features.
46. I use the term 'adverse reaction' to describe the (potentially severe) encounter between a body and an extraneous substance but also the multiple issues which can provoke an immune response. Whilst parents may identify a vaccine as the cause of disruption to their child's health (by way of adverse reaction), it is important to note that a reported adverse event does not necessarily implicate a vaccine as the cause (see Oxford Vaccine Group 2013). Bodily reactions might, for instance, result from a component of the vaccine itself, an issue in the supply, storage, and cold chain, or an underlying medical condition in the recipient or 'target' (Public Health England 2013b). Parents might

view a vaccine as the cause of an adverse reaction, but they might not be able to identify which component (if any) in the vaccination process triggered a reaction. Some of the above-mentioned causes of an adverse reaction can be more readily accepted over others by parents, which can result in all vaccines (and the biomedical technique of inducing immunity) rejected as being a 'toxic' intervention.

47. What is perceived as monstrous is defined and represented by its embodiment, and presents an insult to the socio-cultural construction of 'ideal bodylines – that is the being of the self in the body … where everything is in its expected place' (cf. Shildrick 2002: 1).
48. Routine childhood immunisations which are produced with *human* derived cell-lines include rubella (forming part of the MMR vaccine). Those which are produced with *animal* derived cell-lines include the polio component of the 'six-in-one' vaccine (see Appendix 1), see Oxford Vaccine Project (2018).
49. Cell-lines are a 'technology of living substance' where the boundaries of the body are disintegrated at the cellular-level and reduced to fibres, constituting a microscopic degree of materialisation and commodification of the human body for biomedical and pharmaceutical profit (see Landecker 2007; Lock 2007; Lock and Nguyen 2010).
50. The continued use of manipulated cell-lines deriving from aborted foetuses is particularly problematic for Catholic religious authorities. Such vaccinations were viewed as 'tainted' by the Vatican's Pontifical Academy for Life, which decreed that there was a 'grave responsibility to use alternative vaccines' if possible but that 'vaccines with moral problems pertaining to them may also be used on a temporary basis' (see Pontificia Academia Pro Vita 2005).
51. Doctors have a contractual agreement to record any adverse reaction to an immunisation (or any other pharmaceutical) within a patient's medical record. It is advised that all suspected adverse reactions occurring in children should be reported to GP, or through the 'Yellow Card Scheme', which is specifically designed for voluntary reporting of adverse reactions (Medicines and Healthcare Products Regulatory Authority 2016).
52. Averse and adverse reactions to the pertussis immunisation described in these mothers' accounts resonate with previous studies into how Haredi mothers navigate immunisation services in London, where this particular jab was 'selectively declined' (Loewenthal and Bradley 1996).
53. The cultural construction and communication of vaccine safety is not a concern specific to the Haredim of Manchester, and parents in the broader population of England have demanded that expertise and evidence be based on lived experience of adverse reactions rather than epidemiological or population-level statistics alone (Casiday 2008: 130).

54. The authors suggest that improving knowledge of the Yellow Card Scheme may be one potential solution. This government intervention collates incidences of adverse reactions (though it may be affected by under-reporting).
55. The last recorded outbreak of rubella in the UK occurred in 2013, with twelve confirmed cases (NHS 2015b). Fewer than twenty congenitally acquired cases of rubella have been reported in the UK since 1997. Most incidences of congenital rubella occur in mothers who contract the infection abroad (see Royal College of Paediatrics and Child Health 2015).
56. The NHS does not recommend giving the MMR immunisation during pregnancy. The stage at which a mother contracts rubella can have different implications for the foetus. Risk of CRS is exceptionally high (90 per cent) during the first ten weeks of pregnancy and presents a strong likelihood of adversely affecting foetal development. The risk of CRS (causing visual or hearing impairment) drops to ten to twenty per cent during the eleven to sixteen week stage, with a low chance of deafness remaining until the twenty-week stage (see NHS 2015).
57. Although 'word of mouth' has been regarded as a 'potent source of rumours about vaccination dangers' for Haredi Jews, it has also proposed as a means to circulate an influential counter-narrative of immunisation safety (Henderson, Millett and Thorogood 2008). Rumour is often associated with the circulation of vaccine dangers yet the power relations that substantiate and underline hearsay are not always fully considered (see Feldman-Savelsberg, Ndonko and Schmidt-Ehry 2000).
58. Hebrew (*shailoh* was the vernacular in Jewish Manchester); a question put forward to a rabbinical authority that usually entails a *halachic* ruling, but can also be to solicit guidance.
59. Previous studies have remarked how public health officials colluded with rabbinical authorities in order to increase uptake of immunisations amongst Haredi minorities in Israel. In one instance, public health nurses and doctors were disguised in order to gain access to Haredi institutions, whereas another group refused to comply with rabbinical rulings to immunise children with the MMR or co-operate with state attempts to control outbreaks of measles (Stein-Zamir et al. 2007).
60. The fact that Haredi individuals do not always follow religious rulings or the dictates of authorities therefore demonstrates how 'emblematic labels and stereotypes of collective identity do not always provide reliable instruments of diagnosis of how people experience their own social identity' (Jacobson-Widding 1983: 23), or how they chose to care for their own bodies.
61. 'Contagious communities' is borrowed from Bivins (2015), who discusses the term in relation to the NHS and migrant groups in Britain.

References

Anis, E., et al. 2009. 'Measles in a Highly Vaccinated Society: The 2007–08 Outbreak in Israel', *Journal of Infection* 59: 252–58.

Ashmore, J., S. Addiman, R. Cordery and H. Maguire. 2007. 'Measles in North East and North Central London, England: A Situation Report', *Eurosurveillance* 12(38). Retrieved 1 July 2016 from http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=3271.

Baugh, V. et al. 2013. 'Ongoing Measles Outbreak in Orthodox Jewish Community, London, UK', *Emerging Infectious Diseases* 19(10): 1707–09.

Berjon-Aparicio, S. 2007. 'Cervical Screening in an Orthodox Jewish Community', *Nursing Standard* 21(28): 44–48.

Bivins, R. 2015. *Contagious Communities: Medicine, Migration, and the NHS in Post War Britain*. Oxford: Oxford University Press.

Briggs, C.L. 2003. 'Why Nation-States and Journalists Can't Teach People to Be Healthy: Power and Pragmatic Miscalculation in Public Discourses on Health', *Medical Anthropology Quarterly* 17(3): 287–321.

Campbell, T. 2008. Introduction to *Bios: Biopolitics and Philosophy*, R. Esposito. Minneapolis: University of Minnesota Press.

Casiday, R.E. 2005. 'Risk and Trust in Vaccine Decision Making', *Durham Anthropology Journal* 13(1).

———. 2007. 'Children's Health and the Social Theory of Risk: Insights from the British Measles, Mumps and Rubella (MMR) Controversy', *Social Science & Medicine* 65: 1059–70.

———. 2008. 'Making Decisions about Vaccines: Interactions between Parents and Experts', in J. Nathanson and L.C. Tulley (eds), *Mother Knows Best: Talking Back to the 'Experts'*. Toronto: Demeter Press, 124–34.

Casiday, R., and A.R. Cox. 2006. 'Restoring Confidence in Vaccines by Explaining Vaccine Safety Monitoring'. *Drug Safety* 29 (12): 1105–09.

Cassell, J.A., et al. 2006. 'Is the Cultural Context of MMR Rejection a Key to an Effective Public Health Discourse?' *Public Health* 120: 783–94.

Chabad Lubavitch. 2014. *L'Chaim* issue 855, 23 May.

Cohen, B., et al. 2000. 'Outbreak of Measles in an Orthodox Jewish Community', *Eurosurveillance* 4(3). Retrieved 21 February 2016 from http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=1675.

Coleman-Brueckheimer, K. and S. Dein. 2011. 'Health Care Behaviours and Beliefs in Hasidic Jewish Populations: A Systematic Review of the Literature', *Journal of Religion and Health* 50: 422–36.

Coleman-Brueckheimer, K., J. Spitzer and J. Koffman. 2009. 'Involvement of Rabbinic and Communal Authorities in Decision-Making by Haredi Jews in the UK with Breast Cancer: An Interpretative Phenomenological Analysis', *Social Science & Medicine* 68: 323–33.

Conis, E. 2015. *Vaccine Nation: America's Changing Relationship with Immunization*. Chicago, IL: University of Chicago Press.

Cunninghame, C.J., C.P.J. Charlton and S.M. Jenkins. 1994. 'Immunization Uptake and Parental Perceptions in a Strictly Orthodox Jewish Community in North-East London', *Journal of Public Health Medicine* 16(3): 314–17.

Davidovitch, N. 2013. 'Immigration and the Body Politic: Vaccination Policy and Practices during Mass Immigration to Israel (1948–1956)', in C. Cox and H. Marland (eds), *Migration, Health and Ethnicity in the Modern World*. Basingstoke, UK: Palgrave Macmillan, pp. 151–73.

Davies, P., S. Chapman and J. Leask. 2002. 'Antivaccination Activists on the World Wide Web', *Archives of Disease in Childhood* 87(1): 22–25.

Dein, S. 2004. *Religion and Healing among the Lubavitch Community in Stamford Hill, North London: A Case Study of Hasidim*. New York: The Edwin Mellen Press.

Douglas, M. 2002. *Purity and Danger: An Analysis of Concepts of Pollution and Taboo,* Routledge Classics Edition. London and New York: Routledge.

Durbach, N. 2000. '"They Might As Well Brand Us": Working-Class Resistance to Compulsory Vaccination in Victorian England', *The Society for the Social History of Medicine* 13(1): 45–62.

Esposito, R. 2015. *Immunitas: The Protection and Negation of Life*, trans. Z. Hanafi, reprinted. Cambridge, UK: Polity Press.

European Centre for Disease Prevention and Control. 2012. 'Review of Outbreaks and Barriers to MMR Vaccination Coverage among Hard-to-Reach Populations in Europe'. Retrieved 30 May 2016 from http://ecdc.europa.eu/en/publications/Publications/MMR-vaccination-hard-to-reach-population-review-2013.pdf.

Evans, M. et al. 2001. 'Parents Perspectives on the MMR Immunisation: A Focus Group Study', *British Journal of General Practice* 51: 904–10.

Fassin, D. 2001. 'Culturalism as Ideology', in C.M. Obermeyer (ed.), *Cultural Perspectives on Reproductive Health*. Oxford: Oxford University Press, pp. 300–17.

Feldman-Savelsberg, P., F.T. Ndonko and B. Schmidt-Ehry. 2000. 'Sterilizing Vaccines or the Politics of the Womb: Retrospective Study of a Rumor in Cameroon', *Medical Anthropology Quarterly* 14(2): 159–79.

Foucault, M. 2006. 'Governmentality', in A. Sharma and A. Gupta (eds), *The Anthropology of the State: A Reader*. Malden, MA: Blackwell Publishing, pp. 131–43.

Gardner, B., A. Davies, J. McAteer and S. Michie. 2010. 'Beliefs underlying UK Parents' Views towards MMR Promotion Interventions: A Qualitative Study', *Psychology, Health, & Medicine* 15(2): 220–30.

Greenough, P., S. Blume and C. Holmberg. 'Introduction', in C. Holmberg, S. Blume and P. Greenough (eds), *The Politics of Vaccination: A Global History*. Manchester: Manchester University Press, pp. 1–16.

Haraway, D.J. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.

Health and Social Care Information Centre. 2014. 'NHS Immunisation Statistics: England 2013–14', United Kingdom Government. Retrieved 11 February 2016 from http://www.hscic.gov.uk/catalogue/PUB14949/nhs-immu-stat-eng-2013-14-rep.pdf.

Henderson, L., C. Millett and N. Thorogood. 2008. 'Perceptions of Childhood Immunization in a Minority Community: Qualitative Study', *Journal of the Royal Society of Medicine* 101: 244–51.

Hobson-West, P. 2003. 'Understanding Vaccination Resistance: Moving Beyond Risk', *Health, Risk & Society* 5(3): 273–83.

Jacobson-Widding, A. 1983. *Identity: Personal and Socio-Cultural, a Symposium*. Uppsala: Uppsala Studies in Cultural Anthropology 5.

Kata, A. 2010. 'A Postmodern Pandora's Box: Anti-Vaccination Misinformation on the Internet', *Vaccine* 29: 1709–16.

Kolirin, L. 2017. 'Children at Risk as Charedi Parents Say No to Vaccinations', *The Jewish Chronicle,* 5 January. Retrieved 22 January 2018 from https://www.thejc.com/news/uk-news/children-at-risk-as-charedi-parents-say-no-to-vaccinations-1.430122.

Landecker, H. 2007. *Culturing Life: How Cells became Technologies*. Cambridge, MA: Harvard University Press.

Larson, H.J., et al. 2011. 'Addressing the Vaccine Confidence Gap', *Lancet* 378: 526–35.

Leach, M., and J. Fairhead. 2007. *Vaccine Anxieties: Global Science, Child Health, and Society*. London: Earthscan.

Lernout, T. et al. 2007. 'Clusters of Measles Cases in Jewish Orthodox Communities in Antwerp, Epidemiologically Linked to the United Kingdom: A Preliminary Report', *Eurosurveillance* 12(46). Retrieved 21 February 2016 from http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=3308.

Lernout, T. et al. 2009. 'An Outbreak of Measles in Orthodox Jewish Communities in Antwerp, Belgium, 2007–2008: Different Reasons for Accumulation of Susceptibles', *Eurosurveillance* 14(2). Retrieved 21 February 2016 from http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19087.

Local Government Association and Public Health England. 2013. 'Measles: Frequently Asked Questions', UK Government. Retrieved 30 May 2016 from http://www.local.gov.uk/c/document_library/get_file?uuid=57b1c5fc-2d8e-417f-9c7a-8f273fca7dbb&groupId=10180.

Lock, M. 2007. 'Alienation of Body Parts and the Biopolitics of Immortalized Cell Lines', in M. Lock and J. Farquhar (eds), *Beyond the Body Proper: Reading the Anthropology of Material Life*. Durham, NC: Duke University Press, pp. 567–83.

Lock, M. and V.K. Nguyen. 2010. *An Anthropology of Biomedicine*. Chichester, UK: Wiley-Blackwell.

Loewenthal, K.M. and C. Bradley. 1996. 'Immunization Uptake and Doctors' Perceptions of Uptake in a Minority Group: Implications for Interventions', *Psychology, Health & Medicine* 1(2): 223–30.

Markel, H. 1999. *Quarantine! East European Jewish Immigrants and the New York City Epidemics of 1892*. Baltimore, MD: Johns Hopkins University Press.

Martin, E. 1994. *Flexible Bodies: The Role of Immunity in American Culture from the Days of Polio to the Age of AIDS*. Boston, MA: Beacon Press.

Medicines and Healthcare Products Regulatory Authority. 2016. 'Yellow Card'. Retrieved 26 October 2016 from https://yellowcard.mhra.gov.uk/the-yellow-card-scheme/.

Milligan, G.N. and A.D.T. Barrett. 2015. *Vaccinology: An Essential Guide*. Chichester, UK: John Wiley & Sons.

Muhsen, K. et al. 'Risk Factors for Underutilization of Childhood Immunizations in Ultraorthodox Jewish Communities in Israel despite High Access to Health Care Services', *Vaccine* 30: 2109–15.

National Health Service. 2015. 'Can Rubella (German Measles) Harm My Baby during Pregnancy?' United Kingdom. Retrieved on 23 February 2016 from http://www.nhs.uk/chq/Pages/1104.aspx?CategoryID=54.

National Health Service Constitution. 2015. United Kingdom Government. Retrieved 27 January 2018 from https://www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england.

New, S. and M.L. Senior. 1991. '"I Don't Believe in Needles": Qualitative Aspects of a Study into the Uptake of Infant Immunisation in two English Health Authorities', *Social Science & Medicine* 33(4): 509–18.

Null, W.J. 2007. *Peerless Educator: The Life and Work of Isaac Leon Kandel*. New York: Peter Lang.

Oldstone, M.B. 2010. *Viruses, Plagues, and History: Past, Present and Future*. Oxford: Oxford University Press.

Ovesen, J. and I.B. Trankell. 2010. *Cambodians and their Doctors: A Medical Anthropology of Colonial and Post-Colonial Cambodia*. Copenhagen: NIAS Press.

Oxford Vaccine Group. 2013. 'Vaccine Side Effects and Adverse Reactions', Oxford University. Retrieved 31 May 2016 from https://www.ovg.ox.ac.uk/vaccine-side-effects.

———. (2018). 'Vaccine ingredients', Oxford University. Retrieved 16 September 2018 from http://vk.ovg.ox.ac.uk/vaccine-ingredients

Parker, M., and I. Harper. 2006. 'The Anthropology of Public Health', *Journal of Biosocial Science* 38: 1–5.

Pegorie, M., K. et al. 2014. 'Measles Outbreak in Greater Manchester, England, October 2012 to September 2013: Epidemiology and Control', *Eurosurveillance* 19(49). Retrieved 1 July 2016 from http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20982.

Petts, J., and S. Niemeyer. 2004. 'Health Risk Communication and Amplification: Learning from the MMR Vaccination Controversy', *Health, Risk & Society* 6(1): 7–23.

Poltorak, M., M. Leach, J. Fairhead and J. Cassell. 2005. '"MMR Talk" and Vaccination Choices: An Ethnographic Study in Brighton', *Social Science & Medicine* 61: 709–19.

Pontificia Academia Pro Vita [Pontifical Academy for Life]. 2005. 'Moral Reflections on Vaccines Prepared from Cells derived from Aborted Human Foetuses', *Pontifical Academy for Life*. Retrieved 12 February 2016 from http://www.immunize.org/concerns/vaticandocument.htm.

Public Health England. No date. 'Public Health England Equality Analysis', UK Government. Retrieved 30 May 2016 from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/200317/Public_Health_England_equality_analysis.pdf.

———. 2013a. 'Polio Vaccine Reminder for Travellers to Israel, the West Bank and Gaza', United Kingdom Government. Retrieved 21 February 2016 from https://www.gov.uk/government/news/polio-vaccine-reminder-for-travellers-to-israel-the-west-bank-and-gaza.

———. 2013b. 'Chapter Eight: Vaccine Safety and the Management of Adverse Events Following Immunisation', United Kingdom Government. Retrieved 15 February 2016 from https://www.gov.uk/government/publications/vaccine-safety-and-adverse-events-following-immunisation-the-green-book-chapter-8.

———. 2016. 'Tailoring Immunisation Programmes: Charedi Community, North London'. United Kingdom Government. Retrieved 28 January 2018 from https://www.gov.uk/government/publications/tailoring-immunisation-programmes-charedi-community-north-london.

Purdy, S., K.P. Jones, M. Sherratt and P.V. Fallon. 2000. 'Demographic Characteristics and Primary Health Care Utilization Patterns of Strictly Orthodox Jewish and non-Jewish Patients', *Family Practice* 17(3): 233–35.

Renne, E. 2006. 'Perspectives on Polio and Immunization in Northern Nigeria', *Social Science & Medicine* 63: 1857–69.

———. 2009. 'Anthropological and Public Health Perspectives on the Global Eradication Initiative in Northern Nigeria', in R.A. Hahn and M.C. Inhorn (eds), *Anthropology and Public Health: Bridging Differences in Culture and Society*. Oxford: Oxford University Press, pp. 512–38.

———. 2018. 'Polio Vaccination, Political Authority and the Nigerian State', in C. Holmberg, S. Blume and P. Greenough (eds), *The Politics of Vaccination: A Global History*. Manchester: Manchester University Press, pp. 288–317.

Royal College of Paediatrics and Child Health. 2015. 'BPSU: Congenital Rubella', United Kingdom. Retrieved 23 February 2016 from http://www.rcpch.ac.uk/bpsu-congenital-rubella.

Scanlon, T.J. 2002. 'MMR Vaccine Uptake May Be Lower than Reported because of Manipulation of Target Groups', *British Medical Journal* 324: 733.

Shildrick, M. 2002. *Embodying the Monster: Encounters with the Vulnerable Self*. London: SAGE Publications Ltd.

Sobo, E.J. 2015. 'Social Cultivation of Vaccine Refusal and Delay among Waldorf (Steiner) School Parents', *Medical Anthropology Quarterly* 29(3): 381–99.

Steffens, I., R. Martin and P.L. Lopalco. 2010. 'Spotlight on Measles 2010: Measles Elimination in Europe, a New Commitment to meet the Goal by 2015', *Eurosurveillance* 15(50). Retrieved 21 February 2016 from http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19749.

Stein-Zamir, C. et al. 2008. 'Measles Outbreaks Affecting Children in Jewish Ultra-Orthodox Communities in Israel', *Epidemiological Infections* 136: 207–14.

Stewart-Freedman, B. and N. Kovalsky. 2007. 'An Ongoing Outbreak of Measles Linked to the United Kingdom in an Ultra-Orthodox Jewish Community in Israel', *Eurosurveillance* 38(20). Retrieved 21 February 2016 from http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=3270.

Stöckl, A. 2010. 'Public Discourses and Policymaking: The HPV Vaccination from the European Perspective', in K. Wailoo, J. Livingston, S. Epstein and R. Aronowitz (eds), *Three Shots at Prevention: The HPV Vaccine and the Politics of Medicine's Simple Solutions*. Baltimore, MD: Johns Hopkins University Press, pp. 255–69.

Stöckl, A., and A. Smajdor. 2018. 'The MMR Debate in the United Kingdom: Vaccine Scares, Statesmanship and the Media', in C. Holmberg, S. Blume and P. Grenough (eds), *The Politics of Vaccination: A Global History*. Manchester: Manchester University Press, pp. 240–59.

Thompson, G. 2009. 'Measles and MMR Statistics', United Kingdom Parliament: House of Commons Library. Retrieved 24 January 2018 from http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN02581.

Top, G. No date. 'From an Outbreak of Measles in Some Orthodox Jewish Communities in Antwerp to Specific Actions for Undervaccinated Groups in a New Public Health Goal on Vaccination for Flanders, Belgium', *Eurosurveillance*. Retrieved 21 February 2016 from http://ecdc.europa.eu/en/press/events/Documents/Belgium-From-outbreak-measles-orthodox-Jewish-Communities-to%20specific-actions-undervaccinated-groups.pdf.

Turner, A. 2017. 'Jewish Decisions about Childhood Vacinations: The Unification of Medicine with Religion', *Paediatrics and Health* 5(1): 1–5.

Wakefield, A.J. et al. 1998. [Retracted] 'Ileal-Lymphoid-Nodular Hyperplasia, Non-specific Colitis, and Pervasive Development Disorder in Children', *The Lancet* 351: 637–641.

Williams, Bill. 1976. *The Making of Manchester Jewry, 1740–1875*. Manchester: Manchester University Press.

Wineberg, J. and S. Mann. 2016. 'Salford Jewish Community Health Research Report 2015'. Retrieved 30 May 2016 from http://archive.jpr.org.uk/download?id=2721.

Winograd, Z. 2013. 'Measles Hits Orthodox Community', *The Jewish Chronicle*, 18 July. Retrieved 24 February 2016 from http://www.thejc.com/news/uk-news/109598/measles-hits-orthodox-community.

World Health Organization: Regional Office for Europe. 2013. 'A Report on the Epidemiology of Selected Vaccine-Preventable Diseases in the European Region'. Copenhagen. Retrieved 30 May 2016 from http://www.euro.who.int/__data/assets/pdf_file/0003/191910/EpiBrief_2_2013_FINAL.pdf.

———. 2016. 'Tailoring Immunization Programmes to Reach Underserved Groups – the TIP Approach'. Copenhagen. Retrieved 30 May 2016 from http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella/activities/tailoring-immunization-programmes-to-reach-underserved-groups-the-tip-approach.

Archival Material

Archives & Local History, Manchester (GB127)

M182/3/1–4: Manchester Jewish Board of Guardians for the Relief of the Jewish Poor