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Body, Body Politic and Vaccination in the UK

with Michael Poltorak[1]

Introduction

This chapter analyses anxieties around vaccination in contemporary Britain, at a time when one element of the childhood vaccination schedule – the combined measles, mumps and rubella (MMR) vaccination – became the focus of scientific and public controversy. How this controversy unfolded as certain parents mobilized, mobilized science and met a vociferous counter-mobilization from health institutions is the focus of the next chapter. Here, we are interested in how, against this backdrop, 'ordinary' parents considered the vaccination of their children.

During the late 1990s and early 2000s the MMR issue became a high-profile example of emergent problems in public engagement with science and technology, frequently dominating media headlines and editorials. In brief, certain parents had come to attribute autism-like symptoms in their children to MMR vaccination in the early 1990s (Mills, 2002). Arguably, their views gained credence from clinical studies (Wakefield et al, 1998; Uhlmann et al, 2002). Subsequent studies considering the incidence of autism in relation to MMR among larger populations claim not to show an association (see Miller, 2002). As we discuss in the next chapter, the debate turns, in part, on the significance attributed to epidemiological as opposed to clinical evidence, and on the status attributed to parents' own observations. As medical, popular and media debate unfolded from 1998, parental engagement with the MMR vaccination altered. Despite assurances of MMR safety in scientific literature and by the British Department of Health (DH), and despite information campaigns aimed at parents, uptake declined in many areas, and by early 2004, for children aged 24 months, stood at 79.8 per cent for the UK and 71 per cent for the city of Brighton and Hove

(Health Protection Agency (HPA), 2004). As some parents opted to have the measles, mumps and rubella components separately, a second debate emerged concerning whether these should be provided through the NHS, privately or not at all.

In this context, this chapter begins with a brief outline of how the delivery of childhood vaccination is organized in the UK today. We then consider bodily dimensions to vaccination, sketching out perspectives through which many parents think about their children's health and how vaccination plays into this. Essentially we explore here how 'immunity' is manifested in parental thinking and practice. We go on to address the relationship between parents' social networks and their vaccination practices, and how vaccination has become social. This social world extends to relations with health professionals. As we are exploring in this book, views of the body and immunity are not independent of experience and reflections on the social and wider political world, and we go on to address how wider social reflection and political experience interplay with parents' thinking about vaccination and child health, discerning how common metaphors and framings infuse and integrate bodily, social and political reflection. What this chapter reveals is how this complexity in parental thought and reflection encourages a concern with what it is that might distinguish one's own child from others. This is a set of concerns which lies at odds with a logic of vaccination among public health institutions premised on homogeneity. Crucially, the interactions configured by these contrasting framings have served to shape both. It is this dynamic, we argue, that lies at the heart of vaccine anxieties and problems in vaccination delivery in the UK today.

While this chapter draws on several studies and commentaries from around Britain, our principal evidence derives from ethnographic fieldwork in the city of Brighton and Hove in southern England, between March and June 2003, and a survey we conducted covering this town that probed further issues raised in the fieldwork.

Given that Brighton saw a particularly sharp decline in MMR uptake during the controversy, its health institutions were interested in this study. Also interested, however, were the parents' groups that had mobilized in response to concerns with the MMR. Thus, apart from being the authors' university city, Brighton provided a good context in which to research vaccine anxieties. The city is in the relatively affluent south-east of the UK, and is popular both as a tourist destination and by commuters working in London. The census of 2001 reveals a relatively youthful and mobile population: of a total population of just under 250,000, 42 per cent are aged 20–44 (compared to the England and Wales average of 35 per cent). It is also somewhat peculiar in that the average household size is the smallest in the south east (2.09) and the fifth smallest in England and Wales (Chief Executive Policy Team (CEPT), 2004). The 60 per cent of adults defined as employed work predominantly in public services (27 per cent), financial and business services (23 per cent) and retail (14 per cent). At the time of our fieldwork, the local unemployment rate, 3.6 per cent, was a fraction higher than the national average of 3.4 per cent.

Our fieldwork focused on two contrasting areas of the city, Whitehawk and Fiveways/Preston Park. These areas conform to the stereotypes of a 'deprived' and a 'middle-class' neighbourhood respectively, and we chose them for this reason, as this is a distinction often highlighted in public debate over the MMR. The stereotypes are supported by the 'Overall index of Multiple Deprivation for 2000', which ranks these administrative wards 439 and 5,164 respectively (of the 8,414 wards in England, with 1 being the most deprived) (Department of the Environment, Transport and the Regions (DETR), 2000). Yet 'deprived' Whitehawk certainly covers some rather better-off pockets, and 'middle-class' Fiveways/Preston Park is not without poverty. Many Whitehawk residents feel that their area is unjustifiably stigmatized, and highlight its sense of community. Some parents there are long-term residents of Whitehawk, others have moved there because of its affordability, while others have been rehoused there from estates elsewhere (Netley, 2002). By contrast, the Fiveways and Preston Park neighbourhoods are characterized by commuters, families who have moved there in order to be in the catchment area of perceived good schools, and Sussex-based professionals including university academics.

We identified a focal general medical practice in each study area that served a significant proportion of residents, had more than one general practitioner (GP) and welcomed the research. Neither practice self-identified, or was known in local healthcare circles, to have a particular 'take' on MMR. In each practice, we interviewed the doctors (eight in total) and practice nurses (three in total). We contacted the Health Visitors' base serving each study area and interviewed six of the nine health visitors, going on to carry out follow-up interviews and shadowing the work of three. We contacted five carer and toddler groups – ranging from those organized by health professionals and community workers, to those operating as informal drop-in sessions coordinated by the National Childbirth Trust – a community centre supported by social-services and an organized physical activity/music class. These provided locations for short, informal discussions and much participant observation of 'MMR talk' among parents. We also convened group discussions at these, comprising between four and seven mothers who happened to be present on a particular day, without any advance warning. But as parents of young children, and residing in the study area, or nearby, participant observation extended beyond these contexts into the full gamut of everyday encounters. One member of the team recorded and transcribed 48 conversations, and 23 – evenly distributed between the two study areas – were developed into in-depth, repeat narrative interviews. The sample was opportunistic and was not intended to be statistically representative. The only selection criterion was having a child under the age of three and a willingness to be interviewed, either at the time or by later arrangement at home or another mutually agreed location. Mothers were contacted at the five different carer/toddler groups or introduced by one of six different health professionals. We spoke to only two recommended to us on the basis of their vaccination decision (one by a doctor as an interesting case of non-vaccination; the other by a mother as someone who vaccinated despite having an autistic child). The parents interviewed had a variety of social, demographic, educational and occupational backgrounds, and had made a

Table 3.1 *Vaccination decisions made by mothers interviewed in Brighton*

Vaccination category	Number
MMR, all children, on time	7
MMR, all children, but delayed	2
MMR for one child but not all	2
Single vaccines, all children, on time	0
Single vaccines, all children, but delayed	2
No MMR, but intention to vaccinate	3
No MMR, undecided	4
No MMR, intention to have single vaccine for mumps alone	1
No MMR, single measles vaccine alone	1
No MMR (nor DTP or other vaccines), all children	1
TOTAL mothers	23
TOTAL (have had MMR or intention to go ahead)	12

variety of vaccination decisions for their children, as summarized in Table 1. In the majority of instances, the interviewees were mothers.

Our survey is presented more fully elsewhere (Cassell et al, 2006b).[2] It was built from the ethnography, and explored the relevance to a wider population of a range of social and cultural issues raised by parents, and their relation with maternal demographic and vaccination decisions. It involved a postal questionnaire sent to the mother or guardian of a randomly sampled child (15–24 months old). It probed whether the child was a first or later child; parents' sources of information on parenting and immunizations; the early health of the child; parents' views on the risks associated with measles and the MMR; interactions with healthcare professionals and others in relation to MMR; and the process of decision making, including attitudes to public bodies and governments as sources of advice and influence. In addition, it offered a range of specific statements made by Brighton parents as part of the ethnographic study, for agreement or disagreement. On several issues it solicited free text comments. In this chapter, such statements are left unreferenced; they all derived from mothers in Brighton during March or April 2004. In contrast quotations from our ethnographic work and narrative interviews are referenced with the place and month of interview.

In the UK, vaccination is governed by the Department of Health, which manages vaccination policy and provides information. In most parts of the country, implementation involves GP's surgeries, their nurses and health visitors, who are either based at a large GP practice or have separate offices. Information about immunization is sometimes given at the various forms of state or private antenatal class and groups that parents may attend before the birth of their baby. It is health visitors who have the first formal opportunity – and official responsibility – to discuss immunization with parents, during the regular home visits that they are expected to make during the first few weeks of a baby's life. Parents then

receive a series of official letters from the local health authority calling them for their baby's immunizations, with a time and place of appointment. This is often within the regular baby clinic sessions at GP surgeries where a practice nurse or health visitor gives the injections. If an appointment is missed, a follow-up letter is sent and this may be repeated several times. At the time of study, vaccinations for the combined diphtheria, tetanus and pertussis (DTP) (with meningitis and oral polio vaccine) were called at 2, 3 and 4 months, and at about 1 year old; the same procedure repeated for the MMR, which is officially due at 13 months. Both sets of vaccinations have pre-school boosters. Health authorities run a child health surveillance system that keeps track of which children have had which immunizations, and ensures that appointment letters are sent out at the correct time. In addition to this routinized system, GPs and nurses sometimes take opportunities at treatment and consultation visits to discuss immunization status and if parents are in agreement rectify it on the spot.

The DH has an 'Immunization Information' department that produces educational information for both parents and health professionals. As well as addressing the positive value of vaccination, in recent years its publications have also sought to allay fears about vaccine safety – especially over MMR – in the context of evidence of parental anxiety and falling uptake rates. At the time of our study, the DH also provided incentive payments for GP surgeries that hit certain vaccination targets, with GPs being paid a standard amount once 70 per cent take-up of the MMR vaccine is achieved and higher payments once take-up exceeds 90 per cent.

Bodily experiences and understandings

In our survey, 12 per cent of mothers claimed to be complete non-vaccinators, refusing all vaccinations for their child. The remaining 88 per cent did vaccinate – but reported a range of decisions over MMR. Thus 57 per cent of all mothers reported that their child had had the MMR according to the expected schedule; 11 per cent had decided to delay the jab until their child was older; 18 per cent of all mothers reported that they had chosen 'single jabs', (i.e. separate measles, mumps and rubella antigens, available only privately or overseas); and 3 per cent refused MMR altogether or said they were still undecided. Notably, while these figures suggest that only a small proportion refused the MMR altogether, the proportion failing to comply with the expected schedule as recommended by public health authorities was significantly higher. Notably too, in both the survey and in our ethnographic work many mothers who accepted MMR nevertheless expressed anxieties about it – a finding echoed in several other studies in the UK (e.g. Casiday et al, 2006). To understand this range of perspectives and practices, and the logics underlying them, we begin by considering bodily dimensions of parents' thinking and practices.

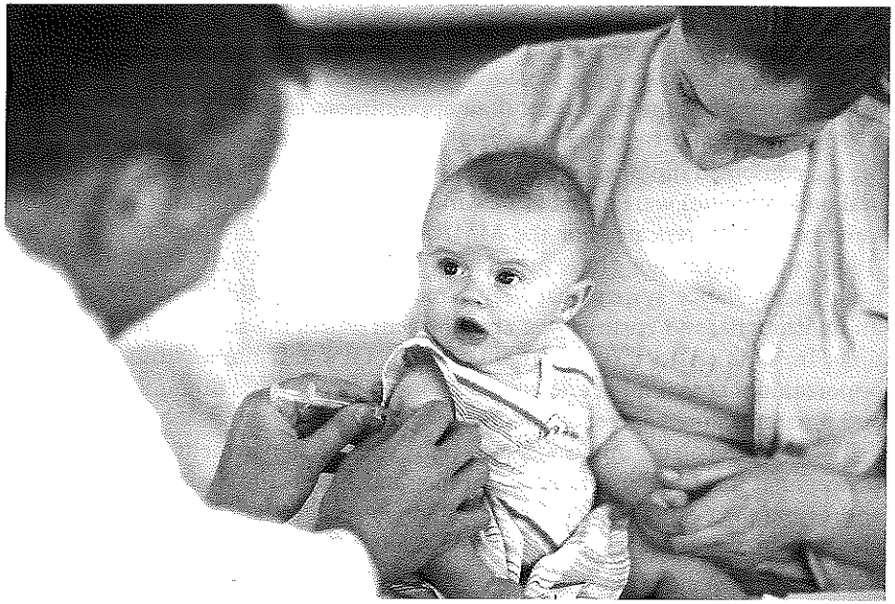

Figure 3.1 *A British baby receiving her MMR vaccination*

Personalized pathways of child health

Here, then, we want to sketch out some common ways that parents in Brighton speak about their children's health, the effects of vaccines, and the benefits and dangers they may bring. This cannot be comprehensive – it would be presumptuous to reduce the thoughts of a town so educationally, socially and culturally diverse to a few paragraphs. Yet drawing on our ethnography and survey, it is possible to discern some common themes.

To begin with, many mothers' narratives distinguished whether a child generally had 'strong' or 'weak' health depending on interactions of environmental, nutritional, inherited and other factors. They also indicated how a child's health depended on a particular, unfolding pathway of these influences, often extending back into family health history, birth, illnesses and other events. Many mothers expressed concerns about their child's sleep, allergies, eczema, asthma, dietary tolerances, character and behaviour in terms of such pathways; as part of the influences along the way, or as part of the outcomes. And many mothers talked about the particularity of each child not just through their different personalities, but also through the history of their weaknesses and strengths. This sometimes extended to an appreciation of how parental illness susceptibilities could be passed on to children. Thus in one instance, even the tuberculosis suffered by a child's grandparents was conceptualized as manifest in their constitution. Such personalized understandings of child health infused what, in the narratives, were often highly personalized views of how to keep a particular child healthy or promote his or her development.

Such personalized perspectives accord with current parenting advice in European and American contexts that promote active, child-centred, personalized approaches for improved child health and developmental outcomes. Indeed in many domains a new equation has come to be drawn between the good parent and the parent who, as the best expert on their own child, seeks to negotiate parenting advice with their child's individual particularities. This reflects a shift from earlier acceptance of more authoritative and generalized childcare regimes visible in, for example, the tenor of childcare advice books from the 1970s (e.g. Spock, 1976) to more individuated regimes adapted to the particularities of each child (e.g. P. Leach, 2003).[3] As we shall argue, particularistic thinking characterizes the ways that many parents now think about vaccination, evaluating the actual, or potential, effects of vaccination on their child in relation to his or her particular strengths or vulnerabilities. First, however, we consider the conceptualizations of the body which frame such thinking about vaccines and their effects.

Notions of immunity

When considering the effects of vaccines, the notion of an immune system emerged as important to the ways parents in Brighton conceptualize their children's health and their particular pathways of strength and vulnerability. In many parents' narratives, a child's strength was equated generally with the strength of his or her immune system. The immune system needs to be 'built' (trained?) through appropriate nurturing, nutrition and exposure to the world. As one mother put it:

> *The image I have is ... that ... for an immune system to work it has to come against something that's not good for you, this is the idea about letting them eat dirt in the garden, if I see that happening I think it's building up their immune system, I don't really understand how. You have to get ill sometimes ... my second child was healthier but the house wasn't nearly as clean – I just didn't have time for all that hoovering – but I figure you need dirt to build up the immune system (Mother, Whitehawk, April 2003).*

These concepts in turn shape the ways that parents consider the possible effects of vaccination. Some described vaccination working as part of this building or 'training' process:

> *That's how vaccination works isn't it, it's a little bit of measles, when the body gets it for real it goes 'I know what this is', fight it off (Mother, Whitehawk, April 2003).*

When encountering similar narratives in America, Martin (1994, p198) found that a dominant way of thinking about vaccines was as a form of education for the immune system, but describes how some people rejected this form of 'state

education', preferring their bodies to learn to adjust to the environment for themselves. Such a notion – often put in terms of a distinction between 'natural' immunity, and 'artificial' immunity acquired through vaccination – emerged strongly in some Brighton parents' narratives. For a few, this underlay a rejection of all vaccinations, with a preference instead for building up a child's natural immunity through diet, lifestyle and hygiene standards. And in our Brighton survey, 43 per cent of mothers who rejected the MMR vaccination (whether or not their child had had other jabs) strongly agreed that it was better to 'get immunity naturally', compared with only 7 per cent of those who accepted it.

For some, exposure to small amounts of dirt and to what they consider as 'normal' childhood diseases constituted key parts of this process of building natural immunity. As a health visitor in Brighton commented:

> Why do you think some mums refuse to vaccinate at all?
> *I think probably because they obviously believe quite strongly in natural immunity and they actually think if the body is healthy and quite strong children are well nourished, sort of brought up in, sort of in not a dirty background, but in a non sterile, they're sort of exposed to dirt as they should be, their children will actually have a stronger immune system than if they're given the chemical, you know and they don't want to have chemical given to their children. Again it's sort of eating organic sort of thing. I think that's probably why (Health visitor, Brighton, March 2003).*

And as mothers put it:

> *My main concern is preserving my child's pure strong state of peak health, not disturbing her natural balance or immune system.*
>
> *I would rather he built up natural immunity by getting measles, mumps and German measles.*
>
> *I really feel strongly that some childhood diseases that people say can be quite dangerous are not dangerous – because it strengthens the immune system.*

The view of the immune system as an individual characteristic needing individualized health care, which emerged in narratives, was probed further in the survey. Most mothers agreed that each child's immune system was different (77 per cent of those who had rejected the MMR as scheduled, compared with 61 per cent of those who had accepted it). For some, whether or not vaccinations were appropriate depended on a child's particular strength, trajectory of immune-system building, and how effective 'natural' methods might be, given their home and lifestyle. For example:

> Have you read a lot about the immune system?
> *A fair amount, and how to boost it naturally as well, with good nutrition and breastfeeding. I think as well if your child isn't well nourished it is maybe a good idea to go along that kind of route and have your child vaccinated to give them some sort of protection, but I think essentially if you've got a good diet and you're well looked after I don't think it's such a necessity (Mother, Preston Park, April 2003).*

Some parents, however, expressed a view that vaccinations could actually harm the immune system, or prevent its effective development. For example as Brighton mothers said in the survey:

> *I am concerned about any vaccinations and whether they allow a person's immune system to develop or whether they do real damage.*
>
> *I don't believe in vaccination. I don't deny they work but I believe they mess with our natural ability to deal with disease. They suppress as most modern drugs do.*
>
> *I'm more worried about her immune system and what long-term damage we are doing to people's immune systems by suppressing them [with vaccinations]. My little boy has got quite bad eczema and again it's probably not related to anything but nobody in our family has ever had eczema, asthma, anything, there is no family history at all, and he has extremely bad eczema and I think well, why?*
>
> *I think that children are given too many vaccinations – this causes them to be ill and develop unexplained allergies in the first eighteen months. The vaccinations cause unexplained illness that destroys routine and sleep patterns.*

Some parents also expressed anxiety about the chemicals, preservatives and adjuvants that accompany the injection of vaccine into the body – especially those which were mercury-based. There was controversy in the US about this at the time, which eventually led to the withdrawal of mercury from vaccines.

Such findings support Fitzpatrick's (2004) observations that worry about threats to the immune system are now widespread in UK society, and that high on the list of potential dangers are immunizations, which some regard as damaging to the operation of natural processes of immunity. It is difficult to find any specific theory of how vaccines might do damage in our Brighton narratives. But as Fitzpatrick suggests, such an inquiry might be to miss the point. He suggests that such beliefs arise from a general feeling of vulnerability to a particular sort of danger that is widespread in contemporary times: danger not from 'nature' itself (in the way that people once feared infectious diseases), but from the products of human intervention in nature – such as through vaccines and antibiotics. The concept of a threatened immune system also provides a link

with other syndromes that medical science, as much as publics, find difficult to explain, such as food allergies, eczema and asthma.

Heightened concern about threats to the immune system from outside also link with concerns about 'autoimmunity', which is another concept of growing significance both in medical science and popular thought. Ideas about auto-immunity have been invoked in some popular literature to explain adverse effects of vaccination, and indeed these figured in some Brighton narratives. For example:

> *We seem to be getting autoimmune diseases now and someone I work with, her daughter's got it and one of the beliefs is that because we are vaccinated against so many illnesses now the immune system doesn't actually get a chance to work and it does actually need to fight something, it turns on itself and that's where you get the autoimmune response (Mother, Preston Park, April 2003).*

Again, Fitzpatrick (2004, p54) links such reflections on the body to wider social reflections, commenting that the influence of such ideas may owe much to the contemporary appeal of the notion of human self-destructiveness. Thus we begin to discern that the understanding of bodily health through concepts of the immune system not only reflects a contemporary, individuated subject position (a flexibly adapted body in a flexibly adapted economy). It is also through the concept of immunity that broader anxieties and problematic experiences – such as social and self-destructiveness – are comprehended and experienced; refracted through this metaphorical context.

The notion that vaccines interact with the complex processes of building an immune system is also confirmed in two further ideas that emerged as significant in Brighton parents' evaluation of whether or not vaccination was appropriate for their child. One is the idea of the immune system 'maturing', as a child got older and stronger. This underlay some parents' preference to delay vaccination, especially the MMR:

> *to allow their immune system to mature a bit, mostly you know, they can see the sense of the vaccine, just a little bit uncomfortable about giving it too young (Health visitor, Brighton, April 2003).*

As other mothers put it:

> *I worry about putting too many diseases in vaccine form into a young child with an undeveloped immune system.*

> *I had to be confident that my child was big and strong enough to have the MMR. 12 months as in Brighton and Hove seems far too young. I will probably vaccinate my child when she is three years.*

Linked to such notions, and a reason why parents often expressed particular concern about the 'triple' MMR vaccination, is the idea of immune system 'overload'. Many of those concerned about the MMR suggested that three vaccines were too many for the immune system to cope with and could 'knock back' a child. In our survey, 86 per cent of mothers who did not accept MMR on schedule agreed strongly that 'the MMR is too much in one go' compared with only 22 per cent of those who accepted the jab. Such ideas have been noted elsewhere in the UK (Offit et al, 2002). As some Brighton mothers put it:

> *It's an awful lot to put into the immune system which has not developed.*

> *I thought no, even if its the single vaccine which isn't as bad as the triple shot it's a lot easier on their immune system, it's still all these poisonous toxins going into their blood.*

Complementary (or alternative) therapies

In Brighton, perhaps more than many parts of the UK, alternative therapies have a strong commercial presence, and appear to many to have increasing popularity. A question arises: how far do parents' ideas about vaccination – and especially its negative effects – reflect the influence of these therapeutic traditions? Certainly, many parents in Brighton are not just seeking treatment and protection for their children from biomedical practitioners, but are also visiting other therapists, ranging from homeopaths to herbalists, acupuncturists, ayurvedic practitioners, kinesiologists and many others who practise in the area. Several mothers suggested that more experience of alternative medicine might encourage rejection of the MMR. This was borne out in our survey findings where 33 per cent of MMR-refusing mothers had consulted a homeopath, in contrast with only 10 per cent of those accepting MMR. Complete non-vaccinators were also significantly more likely to have visited a homeopath; 68 per cent had consulted one about their child. Yet these associations do not reflect any simple opposition between biomedical, pro-vaccination views, and alternative, anti-vaccination ones.

First, this association may be reflecting a confidence to go against biomedical professional expectation, exemplified in consulting alternative practitioners and the camaraderie with other parents that emerges around this, rather than reflecting a clear bodily theory in alternative practice that would make rejection of vaccination logical. Indeed as we discuss later, the importance of parental confidence emerged as a key theme in parents' engagements with health professionals. Second, many alternative therapies share concepts of the immune system with biomedicine. So while many alternative therapists describe what they do as based on an entirely different viewpoint from biomedicine – such as a holistic view, one that denies biomedicine's split between mind and body, or which rejects the dominance of germ theory – many alternative methods themselves either encompass and aim to influence 'the immune system', or the conceptualizations that underlie the therapies can conceptually accommodate the immune system within various larger wholes (see Martin, 1994, p86).

Third, different strands of alternative therapy hold very different views of vaccines. Even within homeopathy there are several schools of thought. Some do not reject vaccination, although others do (see Schmidt et al, 2002). For example, a Brighton GP described how:

> *There are a group of people who won't immunize at all and who talk about 'I'm going to immunize the homeopathic way'. I don't even know if you can call it an immunization, I don't know enough to talk to them about what it does and there are also different schools of homeopathy and I understand that the short course that many GPs do, whichever group trained GPs, don't disagree with immunization (GP, Brighton, April 2003).*

Holistic practitioners, including those with some version of homeopathic expertise, forward diverse ideas about the negative effects of vaccines in relation to the immune system. As one mother described:

> *I have a friend who is a trainee homeopath – she has enlightened me re. the fact that vaccinations suppress illnesses which later on come out possibly as a worse illness (Mother, Brighton, April 2003).*

As another example, perhaps a particularly influential one for Brighton parents, a Brighton-based homeopath who has written pamphlets on the dangers of mass childhood immunization (Gunn, 1992) and who regularly gives public lectures on the topic, considers that:

> *Our immune system learns things; it isn't the same at one day old as it is at 18 months as it is at 5 years, it has to go through a process and there is stuff that you can't do when you are a day old that you can do when you are older. Now the problem with vaccines is that it is a really old model of illness... We vaccinated somebody because what we want are antibodies; now what we have done is single out one element of the immune response (Trevor Gunn, Interview, Brighton, July 2003).*

At a public lecture in Brighton in June 2003, Gunn claimed further that vaccines put toxins into the blood, so that the body cannot carry out its immune functions as effectively as before.

Alternative and holistic practitioners also elaborate connections between vaccination and health problems such as allergies, couched within the concept of immunity. For example writing in *New Vegetarian and Natural Health*, Hancock (2000) describes how:

> *Atopy is the tendency to allergies, manifesting as asthma, eczema, hay fever, etc, the most life-threatening being asthma. It is really no coincidence that atopy is more prevalent in the highly vaccinated Western countries and that its increase has paralleled the increase in vaccination intensity over time... Allergy is sensitisation, and it is very well documented in medical journals ... product inserts and even orthodox medical dictionaries, that sensitisation is the effect of vaccines... The injection of any foreign unwanted material is counterproductive... Firstly, it gives the material deep access to cause damage to ANY organ or system in the body. Secondly, immunity cannot develop. Rather, the immune system is stressed, derailed and confused (Hancock, 2000).*

Fourth, the influence of alternative therapeutic ideas may lie less in their specific theories about vaccines and the body than in the support they give to the ideas of personalized and inherited immune systems that we have found common among Brighton parents. Thus as one Brighton health visitor put it:

> *Some are quite influenced by homeopathy and homeopaths [and] have a different idea of immunity – one more particular to the person (Health visitor, Brighton, April 2003).*

And a father in Brighton:

> *It's just we've talked to a few homeopaths, and they've got a very interesting idea about the immune system – about how you can actually inherit a compromised immune system from previous generation, so you find some people that are very anti-vaccination because their family had TB and they say, 'we think our child is going to inherit that', and vaccination is even more dangerous (Father, Brighton, August 2003).*

This suggests an interplay between exposure to certain homeopathic ideas and discussion of them, and parents' own reflections based on experience and observation of their own children. Even parents who have not explicitly consulted a homeopath about their child are often exposed to such ideas, and these become part of the field through which they come to think about possible vaccine adverse effects. Reflections, however, turn on 'immunity', and again this metaphor (and with it vocabularies of sensitization, stress, derailment and confusion) enables social and bodily experience to infuse each other.

Reflecting on the possible effects of MMR vaccination

One of the most striking findings in our Brighton study was the personalized way that many parents reflected on whether or not their child should have the MMR vaccination, in the context of the public and media debate raging at the time over an alleged link with autism. This was encapsulated in a statement that recurred in mothers' narratives: 'MMR may be safe but not for my child ...'. What followed was often reflection on the various features of a child's particular strength or vulnerability, immune system characteristics, or family health history that underlay concern about MMR or vaccinations in general. Thus mothers evaluated any possible dangers (or indeed, lack of danger) from MMR not in general terms, but in relation to their assessment of their child's particular health

pathway, and vulnerability (or not) to possible effects from the vaccine. The following examples from our survey illustrate this:

> *The issue for us was whether our son could cope physically with a dose of three live vaccines injected at the same time. He had suffered two previous febrile convulsions.*

> *My child suffers with severe eczema which only started after the first immunization; therefore I did not want her to have MMR when her eczema is still so bad, and make it worse.*

> *My first child has always caught chest infections from colds plus doesn't eat a varied diet. He is not particularly robust. We have a strong family history of very bad hay fever, eczema, asthma and food allergies.*

> *My first daughter had milk intolerance and was very ill for the first two years of her life. We didn't vaccinate her with MMR because she was quite weak.*

> *I am naturally worried about the whole autism connection, if you have a low immune system. Both Sarah and Tom[4] are very healthy babies, I prefer to wait and see. If they were allergic I would be more reluctant.*

> *I was more frightened of the potential side effects of measles should I decide not to get Luke vaccinated. Had he been a poorly sickly baby with allergies I might have considered single jabs.*

> *We think that as Callum is strong and healthy he can deal with the injections.*

For mothers who chose not to have the MMR, family health history was sometimes key to their decision. In explaining this further, seven mothers mentioned a family history of Asperger's syndrome; two mentioned autism in the family; three mentioned experiences of autism onset following MMR in the family; thirteen referred to relatives reacting badly to vaccines; ten referred to a family history of eczema, asthma or arthritis; five referred to a family history of irritable bowel; and several gave examples referring to neurological or autoimmune problems. For example:

> *My husband's sister had an extreme reaction to the whooping cough vaccine so that caused us to think about the whole vaccine issue.*

> *There is a history of allergies in my family and a cousin has a two and a half year old who developed regressive autistic symptoms and bowel issues after the MMR jab.*

Some parents raised the possibility of an unknown, undetected 'weakness' in a child, creating uncertainty about what effect MMR might have that in some cases was sufficient to deter going ahead:

> *I'm sure MMR is fine, but, there's a very, very slim chance [of serious adverse effects]. I think if there's a weakness in that child that gets it, the only problem is, you don't know, if your child has that weakness until it is too late, and I just thought, knowing how hard my son was ... (Mother, Whitehawk, March 2003).*

> *Not all the immune systems are the same and you don't know from a hundred children which one will get that and we didn't know if [my son] was going to be that one.*

Thus a particularistic view of child health and the immune system, manifest through family history as well as a child's own health pathway since birth, is highly relevant to the ways that parents think about and evaluate the possible effects of MMR and other vaccines.

The emergence of immunity

'Immunity' has not always been so central to health calculus in the UK. Indeed in public debate and dissent around smallpox vaccination in the mid to late 19th century, a rather different set of conceptualizations was apparent. Vaccination was made compulsory in 1867 but attracted considerable dissent (Durbach, 2005) – combining libertarian arguments with vaccine anxieties – and in 1898 compulsion was relaxed to allow for conscientious objection. This was a time when germ theories of disease were in their infancy, with an understanding that vaccines, like diseases, penetrated the body. Ideas of vaccines' efficacy turned not on an immune system, but more simply on their prophylactic power. Yet germ theory, and the prophylactic power of vaccines, was not universally subscribed to in a society where health (and public health) were strongly linked to upholding the moral virtues of cleanliness and civilization. In this context, Porter and Porter (1988) consider the beliefs which underlay resistance to vaccination in the 19th century, and identify a set of arguments cherishing 'natural' methods of treatment and 'sanitary' methods of prevention. This included the views of anti-contagionists, who denied theories of the specificity of disease, but linked ill-health to 'filth' in the environment and atmosphere which could only be addressed by a wider 'cleaning up' and 'civilizing' of environment and society. In this vein, Beck (1960) describes how the anti-vaccinationists' objections extended to all types of vaccination, and were linked to a worldview that included both the liberty of the individual, and a conviction that civilization consisted in strict adherence to nature's laws of cleanliness. Within these views, there was disbelief in the protective, prophylactic power of vaccination. Indeed vaccination was considered, in the words of one prominent spokesperson, Creighton, as a foul poisoning of the blood with contaminated material. Indeed, many parents

were concerned that vaccination would endanger their children's health through the introduction of infectious material into their blood.

Other theories were also in play. Some of those following germ theory were concerned that vaccines would propagate other diseases, arguing, for example, that the lymph used by Jenner was a source for the transmission of syphilis (Porter and Porter, 1988, p237). Some combined religious arguments (that vaccination interfered with the ways of God) with humoral theories, that smallpox should be encouraged because it 'relieves the system of humours that ought to be carried out of it' (cited in Porter and Porter, 1988, p237). The hydropathic healer John Gibbs, a key proponent of resistance to compulsory vaccination in the 1850s, also argued that removing one disease through vaccination simply allowed others to take their place, maintaining a constant level of disease in society (Porter and Porter, 1988).

Across these debates, then, anxieties turned mainly on the idea of infectious material entering the body through vaccination, rather as diseases did. And such vaccine scepticism made sense in a world in which sanitary and moral living was considered the main defence against disease.

As Martin (1994, p25) documents in the US, the notion that the most important defence against disease was cleanliness and the strict prevention of germs entering the body endured into the 20th century. By the 1940s and 1950s it had taken such hold that enormous attention was devoted to maintaining the cleanliness of bodily surfaces, and to hygiene in the home and at large. As she highlights, this fitted a period of heightened domesticity, at least for the middle classes, in which women were forced out of jobs they had held during the Second World War, and emerging lifestyle and commodity values were geared to the 'good' hygienic home maintained by a housewife. 'From inside the safe and clean home, the world outside looked dangerous and hostile' (Martin, 1994, p31). Martin makes the case that such images of domesticity inter-animated with images of a body whose best defences against disease were its surfaces, as barriers between inside and outside. Indeed, during the Cold War, it was not only the body and the house but also the nation that had to be defended. To help the body, parents purchased malt, cod liver oil, rose-hip syrup, the curiously-named 'radio malt' and iron that were all advertised as helping to make children strong.

From the mid 1950s, alongside these notions, some attention began to be paid to health protective and defensive processes inside the body, and the idea that the body produced antibodies in response to the invasion of disease germs (or vaccines) began to circulate in media images and popular consciousness. Martin finds that, especially from the 1970s, a radical shift took place in which emerging views came to see the body as defended internally by an active, complex immune system able to adapt and respond swiftly and flexibly to changes.[5] These shifts in thinking partly reflected transitions in the science of immunology, which by the late 20th century conceptualized:

> *a body that actively relates to the world, that actively selects from a cornucopia of continually produced new antibodies that keep the body healthy and enable it to meet every new challenge (Martin, 1994, p37).*

But the concept of an immune system also seeped from science into popular thinking and media coverage. By the 1990s, Martin found that in the US, while people might not name and understand its components and processes exactly as scientists did,

> *they readily and vividly convey their sense that the immune system is a complex system in interaction with other complex systems inside the body, a system that changes constantly in order to produce the specific things necessary to meet every challenge (Martin, 1994, p80).*

Martin thus argues that the immune system has 'moved to the very centre' of cultural conceptions of health (1994, p186), becoming a dominant field in which people think about and evaluate all kinds of health issues. She documents a widespread process during the 1980s and 1990s through which in medicine, media and popular thought, a wide variety of health conditions, from cancer to allergies, were reinterpreted as immune system dysfunctions, and the effects of environmental factors came to be understood as mediated through the immune system. In this, popular and media portrayals also underwent a further shift from the use of military metaphors, in which the body defends itself from external attack, to more holistic notions of the body as a complex regulatory system within a larger world order. Martin suggests, furthermore, that the immune system also provides a much broader metaphor, extending to emergent forms of social and political–economic organization. Notions of an innovative, agile body resonate with the ideals of innovative, agile firms that pervade contemporary forms of business and corporate organization based on 'flexible specialization', in a world of mobile capital and intensified electronic communications. They also resonate with notions of individual perfectibility – of lifestyle as much as health – in contemporary western society, to be achieved through personal training and self-improvement. Yet the sense that everything about an individual's health is connected to everything else, and that it is one's personal responsibility to manage and control these interactions, also leads to what Martin (1994, p122) terms the paradox of 'empowered powerlessness': 'feeling responsible for everything and powerless at the same time'. Similarly for the UK, Fitzpatrick (2004, p51) argues that popular concepts of immunity reflect what he identifies as a 'prevailing sense of individual vulnerability in an age of anxiety'. Among Brighton parents, as among others in contemporary western societies, such understandings of immunity, along with ideas of strength and weakness, have become pervasive terms in which people think about vaccination for their children.

Vaccination talk: the social world of anxiety

Vaccination is not something that parents only think about for themselves, or speak about with health professionals. When considering vaccination, parents interact with a much wider social world. Of particular importance are discussions with other parents. As a group of young mothers in Whitehawk put it:

Figure 3.2 *A setting for MMR talk: Mothers and babies in a post-natal support group in the UK*

What information have you had apart from the newspapers?
(Mother A) You probably get more information from talking like this, as a group, if [my friend] comes around we talk about different things, maybe I'll try that with Kayleigh .... you get more of an idea.
(Mother B) You feel that you can ask, you can't actually go to the doctor and say, look I've got a real big problem, life is really hard, I cannot cope, but you can say to your friends, 'she's a nightmare, have you got anything I can try'.
(Mother A) Everyone's been through exactly the same.
(Group discussion, Whitehawk, February 2003).

It is the rare mother who has not been drawn into discussing vaccination, and MMR in particular, given prevailing uncertainties about it, along with other issues of concern with their children's health and wellbeing, whether it be sleeping, feeding, behaviour or childcare arrangements. Such discussions take place in a variety of settings. Some are with acquaintances in the organized groups and carer-toddler sessions that many mothers participate in with their children. Some strike up informally in the park or the school playground. Some are with closer friends in informal gatherings at home. 'MMR talk' has become a social

phenomenon in Brighton, as it has in Bristol (Evans et al, 2001), Birmingham (Petts and Niemeyer, 2004) and presumably the country over.

Talking vaccination, constructing community

Many mothers in Brighton described such interactions as their most valued and useful in the difficult process of thinking about MMR. But this was not because they are a source of definitive advice. Rather, 'MMR talk' seems to have a particular style and ethos that mothers find supportive. The parents we encountered value the informal, friendly and above all egalitarian quality of such conversations. Little heed is paid to people knowing more than others, by having done more research or by having older children. Given that many parents are thinking about MMR in relation to the particular characteristics of their own child, more dogmatic advice from peers is less appropriate. Rather, the ethos of MMR talk centres on a sharing of experience and views which can open up or support the process of 'making one's own mind up'. Little sense emerges of anything resembling peer pressure to vaccinate or not. What does emerge is a sense of taking other parents' concerns seriously and respecting them, and of acquiring confidence in one's own position through listening to other's views. This is clear in the following quotations from mothers:

My friend asked me what she should do and I say whatever is right for you. I don't say, 'oh don't do that', I'd tell them how I feel but 'you may have other reasons to feel how you feel' and she did have the MMR done. I didn't say 'oh you stupid' whatever, it was like 'Ok is the baby fine? Good'. You can't put your highly opinions on them, otherwise if they did what you did and they did catch something they could blame you, couldn't they? (Mother, Brighton, April 2003).

Half the mothers I spoke to were for it. Half were against. No-one really influenced me. I made the decision by myself.

I found it reassuring talking to parents who'd given their child MMR vaccination and their children were fine.

Talking to people whose children had already had MMR with no problems gave me more confidence.

It is good to talk about your concerns – but this just helped to confirm my decision.

I talked a lot to other mothers I know well. As their views varied a lot I felt stronger in my own position.

Talking to friends who hadn't gave me more information and confidence to do what I thought was right.

At the same time, styles of MMR talk also seem to favour a questioning of vaccination over any blind acceptance of official pro-vaccination advice.

Camaraderie among mothers rejects any denial of parental right to choose. However scientifically informed a mother is, the powerful association between talking about MMR and fomenting relationships with other mothers means that failure to question assurances of MMR safety often seems to threaten newly established and valued relationships. Equally, strong identification as a mother makes it difficult not to relate sympathetically to the accounts of mothers (first-hand, or through social networks, internet or media) who noticed a dramatic change in their children's behaviour after vaccination. In short, to ignore concerns about MMR, one has to distinguish oneself as a mother from other mothers. Expressing sympathy with MMR anxieties is part of a process of constructing community.

MMR talk among networks of mothers is significant across the social spectrum, and among mothers who end up deciding for or against MMR. Only a few – 14 per cent – agreed with the survey statement that 'I tend to avoid talking to my friends about the MMR issue', and this did not correlate with any particular vaccination decision. In slight contrast, 25 per cent of the complete non-vaccinators agreed, which suggests that total non-vaccination might be a rather different social issue. Many mothers who do not vaccinate at all appear to feel defensive and sensitive about their more extreme position and are more reluctant to engage in conversation about what they find a highly emotive issue except, perhaps, with others whom they know share their views. Sharing of positions around total non-vaccination thus tends to be part of the construction of more narrowly defined communities of parents, with non-vaccination talk often taking place in focal, rather than general settings, such as around public lectures by anti-vaccination campaigners and alternative therapists.

For some mothers without established social networks with other parents, the social relations of parenting – including vaccination – are structured somewhat differently. For instance on Brighton's Whitehawk estate, some of the newly settled mothers we met from low-income groups lacked established community relations. Their parenting relations were structured more through their engagement with health and social services. In this vein, four newly settled single mothers expressed how their sense of isolation from peers overwhelmed their ability to make what they regarded as an informed choice for the DTP.

> *Had all of the baby jabs done. Because being on my own, as I said my mum wasn't down here and I hadn't established a group of friends down here, I felt really vulnerable. The responsibility of looking after him was extremely overwhelming (Single mother, Whitehawk, April 2003).*

In this account, a feeling of vulnerability was a reason for handing over judgement about vaccination to health professionals.

This is a rare case, however. In our survey, no one specified a conversation with a health professional as having particularly influenced what they planned to do about MMR. It was largely conversations with peers that parents found most valuable, along with conversations and advice from other relatives. In some cases, those taking vaccination decisions seek out relatives or neighbours who also have

some specialist medical training. In others, discussions and advice about MMR take place in the context of ongoing kin relationships that parents find valuable and supportive. The role of a child's grandparents is important in some cases. In Whitehawk, especially, some mothers are living with extended families nearby, and day-to-day interactions with grandparents are part of everyday parenting. For those living far from their parents, whether or not they discuss MMR with them is much more varied, and depends on personal relationships.

One might expect grandparently advice to emphasize alignment with the state and authority, reflective of an era when grandparents themselves were parenting, and when parenting and engagement with health services was less a matter of individual choice, and when polio vaccination eradicated this devastating childhood disease. Yet, most grandparents are also of a parenting generation that pre-dated MMR vaccination. While some have personal experience of severe complications from mumps or measles, many recall these as the relatively commonplace diseases of childhood that they were for most, and of taking children to mumps parties to ensure that they caught it before puberty. Moreover, other factors have altered their views, giving rise to a generation of what one might term 'post-modern grandparents' in relation to vaccination. Many grandparents are now of a generation that has experienced public questioning of vaccination as well as other aspects of science and technology – for example through firsthand experience of the pertussis controversy in the 1970s (see Baker, 2003) – and are strongly in tune with contemporary debates around such issues. Thus grandparents' part in 'MMR talk' is now just as likely to dwell on MMR concerns in relation to mild childhood diseases, as it is on the importance of vaccination. For example:

> *My mum thinks that in the past when there were no midwives and health visitors they just got on with it. Mum thought she didn't think it [vaccination] would work for us, she thought if we were ill we would be ill (Mother, Whitehawk, April 2003).*

> *Talking with my mother and mother-in-law influenced my views on MMR. Both have friends whose children became autistic after MMR.*

> *My parents felt that giving my baby the MMR could be dangerous to him so they offered to pay for single vaccinations. I accepted their offer.*

The encouragement to research (or 'to look into it') and then make up your own mind is a pervasive theme in MMR talk, and in parents' narratives about the process of deciding. Indeed vaccination seems to have become a subset of expected personal research into parenting options and advice of all kinds, encompassing health, diet, sleep, behaviour and other issues. That some parents are implicitly defensive of not looking into vaccination in more detail is evidence of this. Personal research is encouraged by other parents, as well as by health professionals. It variously involves searching for recommended books, contacting parents' groups for advice, and surfing the internet. In this, parents often have

to balance the dramatic claims of individual mothers, the perspectives of anti-vaccination campaigners, serious work on the history of science and public health, and relatively inaccessible texts on immunology.

Through these processes of research, parents' social networks around vaccination are extended to encompass people met at talks or lectures, and those contacted through websites. Indeed, several organizations that aim to provide vaccination-related information and advice to parents run online discussion fora to which parents contribute questions, share experiences and respond to others. These range from those aligned with governmental, pro-MMR positions, such as the British National Health Service Website, to those offering highly open fora, such as the BBC website, to those largely questioning vaccination, such as 'JABS' and 'The Informed Parent'.[6] They include parents sharing stories of what they suspect might be vaccine damage to their children, and other one-off contributions asking for information, for example about single vaccines, or where they might obtain advice. These dedicated discussion boards are joined by a range of other online fora, including both websites for general baby chat and care tips – which have become sites for 'MMR talk' among other topics – and temporary electronic fora set up to coincide with, or follow-up, specific media events. By participating in these, parents join and help to construct 'virtual communities', extending MMR talk into them. This is the vaccination-specific version of what Madge and O'Connor (2006) refer to as cyber-parenting. MMR engagement is thus linking people in virtual networks which in turn link localities both within and outside the UK, forging aspects of solidarity and common identity in the ways that Melucci (1996) and Castells (1997) see as typical of contemporary 'network society'.

The process of deciding

Perhaps not surprisingly, given the range of views and arguments they encounter, most parents do not find that MMR talk or research leads them logically to a particular decision over MMR. Indeed the relationship between processes of discussion and decision is usually somewhat indirect. For some, exposure to diverse perspectives magnifies confusion:

> *I don't feel we have enough information. I sway one way then the other. Single vaccinations concern me too. Confusion really. When I do do it, and I probably will, it will be closing my eyes, running and jumping. (Mother, Brighton, April 2003).*

Many parents we talked to had participated in the agonizing of other parents, had heard stories of 'vaccine-damaged' children, talked conspiracy, and expressed belief in many of the DH's list of 'MMR myths', yet still went on to vaccinate. While this could be attributed to 'trust', several mothers emphasized lack of confidence or lack of knowledge as explaining decisions to vaccinate.

> *I'd have to be a lot more knowledgeable not to have it (Mother, Brighton, April 2003).*

> *I'm not confident enough to go down the non-vaccination route (Mother, Brighton, May 2003).*

This positive relationship between confidence and a sense of knowledge, and MMR refusal, was borne out in our survey. Here, 70 per cent of those who accepted the MMR according to schedule felt they would have liked more information to make a decision, whereas only 44 per cent of those who refused, delayed or sought single jabs felt this. In other words, more non-acceptors felt that they already knew enough.

Even among parents intending to vaccinate, the final decision to vaccinate may be postponed for logistical or familial reasons, including household gender relations. Our survey indicated that 23 per cent of Brighton mothers said the final MMR decision had been theirs alone (an equal percentage for those who decided for and against MMR), whereas 76 per cent said the decision had been made jointly with their partner or the child's father. Only in 1 per cent of the cases (all in favour of MMR) did the partner decide. Making the decision jointly perhaps implied a desire for shared parental responsibility. Yet there are cases where a child's parents disagree on the best course of action, or one parent feels more certain than the other, and decision making becomes a process of negotiation shaped by other aspects of their parenting relationship.

Thus a decision to vaccinate does not necessarily reflect resolution or acceptance of the safety of the MMR. It may on occasion be an outcome of intra-familial negotiation, or a more contingent, spontaneous or professionally encouraged decision on the spur of the moment, when in the doctor's surgery for other business. The difficulty of dealing with the wide variety of social and economic factors, pressures, uncertainties and implications for parental responsibility are captured well in the narrative of a 21-year-old single mother from Whitehawk who had postponed the MMR vaccination for about six months.

> Do you ever get to the point when you can decide?
> *She's going to have it. I've been told. Her dad's told me he wants her to have it and it's a strong thing that he wants her to have it, so he's going to take her to have it, and I'm ok with that. I don't want to take her to have it, really.*
> Do you feel because it's his decision, because he took the responsibility, takes the pressure off you a bit?
> *A bit yeah. I do feel like it's a lot of pressure and I do think she should have it, really, realistically. I just cannot pay for single ones. If I could afford it, I would have single ones. Why should your child's development maybe suffer, we don't know yet, because you can't afford it... That's not really fair is it?*
> How come your partner is so sure that it's right?
> *Well, ... hmm ... she needs to have something done. I'm weighing up the*

pros and the cons of it, for her to have it, she could become autistic then that's the chance you are going to take. If she doesn't have it, she could get very ill, she could die. Then realistically I'd rather she be autistic. It sounds really silly, maybe, I'd rather take that option, if she's still here with us, and I would still love her, she is still my child, rather than thinking to myself I'm putting her through all that illness, for nothing, you know, when really I could vaccinate against that. It's probably less chance of her becoming autistic than there is of her actually getting ill. Even if she didn't get really poorly she'd still get ill, she'd still get it, she's having it now, (laughing...) I'm not quite sure but she's having it. (Single mother, Whitehawk, March 2003).

While many studies have treated MMR as a single decision, then, our research suggests this may misconceive parental engagement. Actual outcomes depend not on a singular deliberative calculus and the information, education and social characteristics that inform it, but on contingent and unfolding personal and social circumstances in an evolving engagement. The MMR issue has taken on a social life, and understanding parental engagement with it requires us to understand how 'MMR talk' and anxieties unfold amid relationships between parents, and with the diverse worlds of official and complementary health delivery. Parents 'talking MMR', are not merely expressing their reading of science, but also what they regard as valued parenthood, their sense of responsibility to their child, their views of institutions, how they place themselves among their friends, and so on. How parents read or react to different information sources (whether pro-MMR DH publicity or health professionals' advice, or information from anti-MMR pressure groups) depends on when and how, in these social processes, they encounter them – questioning the central significance of information in itself emphasized in many studies.

Neither social engagements with MMR, nor personal reflections on its implications for a particular child's health, stop with the act of vaccination (or without it). In the immediate weeks after vaccination, parents may be aware of possible side effects and express relief that nothing serious happened. Even long after vaccination, when reflecting on problematic aspects of their child's development, the unnerving worry remains for some that the MMR might be responsible. Future children may not be vaccinated with the MMR even if previous children were. Whatever the choice, the process of learning about MMR continues and plays a role in future vaccination decisions for future children.

You've got to hope and pray that the decision that you made was the right decision, yours and your own (Mother, Brighton, May 2003).

Nonetheless in our survey, ex post facto, 95 per cent of those who accepted MMR on schedule and 93 per cent of those who did not, who delayed or chose single vaccinations, said they felt certain they had made the right decision.

In remembering and communicating their decision to other parents in MMR talk, some issues, such as the importance of choice, appear to become a safe

idiom through which to verbalize more ambiguous experiences. Parental choice emerged as an important value for all, regardless of their particular decision. Indeed very few mothers strongly agreed that it would be easier if the decision were made for them.

Do you think you think about it differently now post event than the way you were thinking about it then?
Possibly, I think, I don't think I would change my mind and have the MMR but I don't necessarily think the MMR is a bad vaccine, that there is a problem with the vaccine. I just think there should be a choice for a parent to, you know, so that you can make the decision yourself. Unless something comes out that there is absolutely no link with autism, it is completely safe, I think the choice element should be there and that's how I felt at the time that I wanted to make that choice and that's what I chose for my children. But I just think the choice should be there for all parents (Nurse and mother of two children both vaccinated with single vaccines, Brighton, April 2003).

Assuming personal responsibility

A strong theme which emerged in parents' discussions of their MMR thinking was a pronounced sense of personal responsibility, and assumption of personal blame, for any harm that might come to a child either through disease or through vaccination adverse effects. 'I couldn't forgive myself if ...' (my child got autism/measles) was a common refrain. Survey responses confirmed this sense of personal responsibility, although unsurprisingly those who had opted for the MMR expressed their personal responsibility more in worry about measles than about possible MMR side effects. Mothers in a study in Birmingham also emphasized that as mothers they had a burden of responsibility to make the right decision for their children, and that this sense of responsibility had heightened in the context of uncertainty over MMR (Petts and Niemeyer, 2004; Petts, 2005).

Both political discourse and sociological analysis suggests that the importance of personal responsibility – in this case responsibility for a particular child – has become a major societal value in recent decades in Europe and the US. This is seen to be linked to processes of individualization and a shift from direct government to an agenda emphasizing citizens' own rights and responsibilities (e.g. Beck, 1992; Rose, 1999; Beck-Gernsheim, 2000; Beck and Beck-Gernsheim, 2002). In what Beck (1992) calls 'risk society' publics must shoulder much of the burden of risks that institutions of government cannot control. Individual responsibility for health is claimed to be 'a major value of the modern age' (Beck-Gernsheim, 2000, p131). To some extent our findings resonate with this theme. However, a sense of individual responsibility does not suggest that people are simply thinking and acting as atomized individuals; rather, it goes along with the forging of social relations and forms of community among parents, through MMR talk. Moreover, our findings do not conform with the view in some health literature that the importance of individual responsibility and choice is more important

to higher socio-economic groups (e.g. Lindbladh and Lyttkens, 2003). These values were emphasized by mothers in Preston Park and Whitehawk alike, and across the class spectrum in our survey. Thus reflection on the uncertainties around MMR is not confined to affluent groups, leaving behind an unreflective poor; rather, people's practices and the social processes of MMR talk that shape them seem to be a more general phenomenon of modern parenting. In shaping people's varied engagements, pre-defined social groupings and classifications are less significant than issues of personal history, reflection on a child's personal health and strength, genetics and health of children, experience of other mothers and their children, and issues of confidence – fields which are part of and are shaped by MMR talk.

In stressing personal responsibility and choice in the context of MMR, it can be argued that parents are overriding longer-established social norms around vaccination. It has been argued that most parents have their children vaccinated because it seems 'the normal thing to do'; attending when called is a habit. Moreover the norm is not just a non-reflective act, but also involves moral judgement: vaccination seems the 'right' thing to do, given the social benefits from herd immunity as well as the benefits to the individual (Streefland et al, 1999). Thus as Petts (2005, p793) puts it, 'vaccinating children is "right" and the habit of taking your own child for vaccination serves to reinforce both the individual and the collective notion of normality'. Social routinization of vaccination, in this view, is thus part of reinforcing one's sense of membership of a collective, of society. To some extent, such norms applied in the days of the UK's immunization programme prior to the uncertainties around MMR, and they still hold, for many, for the other vaccinations in the schedule – many parents just turn up as expected for the DTP. Yet people do not adhere to social norms unreflectively, and the impression of 'habit' overlooks the variation and active forms of reflection – anxieties both positive and negative – that will have shaped how different parents arrived at their vaccination appointment. Moreover however important 'routinization' has been, it is clear that for MMR, such norms have been overturned. MMR is a matter of intense reflection, and little routinization.

How then, in the context of MMR, do parents balance the potential conflict between individual responsibility for their own child, which might suggest in some cases not having MMR, and collective responsibility to contribute to the social good through having MMR vaccination? In health policy circles it has sometimes been suggested that parents are acting selfishly in refusing MMR, flouting broader societal responsibility and morals. However the high sense of personal responsibility evident in mothers' responses suggests that the MMR issue has become so important that personal parenting concerns are paramount, leaving less space for wider social considerations. Nevertheless around 60 per cent of mothers claimed, when asked in our survey, that when deciding about MMR they did consider possible benefits to other children. And more still – 67 per cent of those having MMR on schedule (although only 37 per cent of those not) felt it was right for health professionals to push this social message. Parents are thus engaged in a tough balancing act of personal and social responsibilities.

Some feel that if they must prioritize their own children, then responsibility for upholding collective morals should pass to the state. Parents' own statements convey both a strong awareness of these conflicting responsibilities, the poignancy of these dilemmas and varied ways of resolving them – in ways which often make reference to a child's personalized immune system:

> *I did think about benefits to other children, but it makes me so angry when parents blame others if there is an outbreak of measles. The choice over MMR is so difficult.*

> *I did think about benefits to other children but it was very much secondary to what was best for Molly – with so many children un-immunized it was even more important to protect her.*

> *I believe my child's immune system to be good due to having a healthy diet and holistic healthcare and I intend to build on this. I also believe that having the MMR will compromise her immune system. Thus I only see benefits to other children.*

> *I believe that herd immunity is vital – as the number of immunized children drops the risk of epidemics increases and I would feel a responsibility in that if I did not have my child immunized.*

> *I realise that if my child was vaccinated this could protect weaker children who can't be vaccinated from the disease. However this didn't make me vaccinate her as she is my responsibility and how do I know at age one how strong she is?*

Finally for others – including complete non-vaccinators – doubt in the efficacy of mass vaccination or a conviction that it is damaging means that the moral position collectively, as well as individually, is to reject vaccination:

> *The rationale for mass vaccination is protection of the weakest who cannot have the vaccines for health reasons. I am not prepared to risk my child's health when I am not convinced that vaccination works as stated by the health professionals and government.*

> *If mass immunization really works (and I'm not sure) that is great. But why risk the health of my child in the future for something which might not protect him or other children – it doesn't always work.*

> *The long-term health of all our children is being severely threatened not just by MMR – but by all immunization.*

> *I believe I have a responsibility both locally and globally to consider others but ... I do not regard vaccination as the best choice for health.*

Thus in the contemporary British context, MMR has joined other parenting issues as a matter for much personal reflection, responsibility and a desire for choice. Decisions about vaccination involve balancing diverse anxieties and notions of responsibility, within an ultimate sense that one only has oneself, as a parent, to turn to. Yet at the same time, through vaccination talk social relations and a sense of community among parents in their dilemmas are being created.

Social relations with frontline health professionals

Parental encounters with health workers at the front line of vaccination delivery – GPs, nurses and health visitors – provide formal occasions for giving advice, but they are also social encounters. At the same time, vaccination is just one of many issues around which parents and health workers interact. As our discussions with and survey responses from parents confirmed, these broader relationships – whether between parents and a particular health worker, or with their institution – shape the kinds of interaction which take place around vaccination itself.

Our interviews and discussions with doctors, nurses and health visitors suggest that many find their role as brokers between national policy and parental views extremely challenging. As people and often as parents too, health workers have not only expert knowledge but also personal experiences around vaccination which inevitably influence how they approach this role, and their encounters with parents. Several were uncertain about the MMR issue themselves. They were more comfortable when giving a range of information from which parents could make choices.

The social nature of interactions with health professionals becomes apparent in who parents choose to discuss vaccination with, as well as in what actually happens in those discussions. The majority of the GPs we interviewed feel little involved in most parents' MMR decisions. They find that very few parents consult them. Moreover, most of the parents who do, have already made up their minds and seek support rather than advice.

Indeed many mothers confirmed that they did not raise their questions with GPs. They see them as time-constrained and probably partial in their advice, not least because of their perceived financial gain from meeting vaccination targets.

> *My GP encouraged the vaccine but I feel that GPs are bound to do so.*

> *I found it hard to get unbiased views so I chose the middle ground. I felt doctors told me what they had to say and didn't support me with their concerns so I didn't trust them.*

> *I didn't trust the doctor, I thought she was just trying to get her quota up. The health visitor was neutral.*

> *As a result of our 'choice' regarding vaccination the children have been removed from the GP list as the practice will fail to meet its targets and thus lose financially. The practice has stated that it will continue to treat the children until they can go back on the list in one year's time. However it places us in a rather vulnerable position re. healthcare and does little to counter a view of a politically engineered health system.*

Such comments would tend to qualify the popular view in the UK that doctors are a highly trusted 'expert' group, and indeed there are studies that find this (e.g. Tarrant et al, 2003). Clearly, it depends not just on the nature of people's interactions with their GPs, but also on the issue at stake.

Some mothers from our more deprived study area, Whitehawk, were also worried about appearing ignorant in voicing questions that a doctor might find 'stupid'. Some feel patronized or intimidated in engagement with health professionals, and thus do not ask questions. This can be read (mistakenly) as passive acceptance (compliance). Thus to quote one GP:

> *I think the majority of Whitehawk are not having to make those decisions, because they are allowing us to make those decisions, because they are quite happy to hand that over, that responsibility over, they don't want to have to think about that, hopefully because they trust what you are doing or don't have the space to put thought into it, I don't know (GP, Whitehawk, February 2003).*

However, that same GP, in relating one particular case, appeared highly aware of how such institutional relations influence their encounters. As she related her encounter with one particular mother for example:

> *She won't even come back and talk to me. She is not as educated, she finds it really threatening to talk about the details, and that [information] pack is very technical, which is one of the reasons that I wanted to see her again.*

Parents' interactions with health professionals are thus shaped by broader relations of power and authority. These can have real social and material implications. For instance, a health visitor working in a deprived area of Brighton suggested that in a setting where social services treated the completion of infant immunization schedules as one among other indicators of adequate parenting, mothers were reluctant to voice any anxieties about vaccination for fear of attracting the authorities' attention. Seen in this way, seeming compliance may reflect reluctance to question more than an informed realization that MMR is 'safe'.

Nevertheless, there is great variation in health professionals' personal approaches, and in the personal relationships that parents might have built up with them. In some cases, this meant that a GP's advice was highly significant. For example:

> *The decision was made with our first child and I talked it through at length with my doctor who was very supportive either way – others in the*

health profession were very pro-government, pro-vaccination and it was a bit of a brick wall.

My GP is very supportive and takes time to explain anything I don't fully understand. I discussed it with him and felt it was best to have the vaccine than be at risk of measles-mumps-rubella.

Turning to health visitors, most of those we interviewed were strongly appreciative of parents' dilemmas, and did not wish to compromise carefully built relationships through anything that might be perceived as a heavy-handed advocacy to vaccinate. Moreover, vaccination is not the immediate priority for health professionals working with parents who are perceived as deprived, with many related health and social problems. As one professional described her work in Whitehawk:

I think your role is much more, damage limitation. Sometimes they have so many illnesses and so many risk factors, that you take the worst one and try to deal with that.

Vaccination is, however, a usual topic in the visits mothers have from health visitors in the period after birth, and in baby clinics for weighing – and it is part of a health visitor's role to make it so. Health visitors vary in how they play this. Most see their role as supporting a parent's own choice-making process about vaccination, while aware that this does not always lead to the outcome being vaccination acceptance.

Some health visitors are themselves confident in the safety of MMR and are comfortable in passing on government advice and documentation to parents. Others are themselves uncertain or have had personal experiences which make them question MMR safety. Their approach is often to offer a diverse range of information and options, balancing the DH leaflets with those from parents' support groups such as JABS and The Informed Parent, and from clinics offering separate vaccines.

I was thinking of not giving it at all. My health visitor was very supportive in advising to look for other options. She gave me a telephone number to look for single vaccines.

Our survey explored how mothers experienced or imagined health professionals' reactions to different vaccination decisions. Of those who had decided in favour of the recommended MMR schedule, it is not surprising that virtually all felt their doctor and health visitor would approve. However of those who had decided to delay or seek single vaccinations, responses were not only negative: 30 per cent considered that their doctor would disapprove of their choice, while 21 per cent considered that he or she would either 'approve' or 'wouldn't mind'; 46 per cent considered that their health visitor would disapprove, but 47 per cent believed that he or she 'approved' or 'wouldn't mind'. The image of health professionals universally conveying a pro-vaccination line and disapproving of those who do not accept MMR thus does not hold up. Rather, parents experience and regard health professionals' judgements in more varied ways, and often as supportive of or flexible about parents' own choices (and right to choose) even when this conflicts with vaccination policy.

Health professionals often report parents asking what MMR decision they made or advised for their own children or relatives. Indeed, several parents' narratives singled this out as a crucially influential piece of information:

The practice nurse said she has a grandchild herself and she would not encourage her daughter to vaccinate if she did not feel it safe.

When I spoke to my GP he put my mind at rest immediately. He gave the MMR jab to his three children (recently) and gave me statistics as well as telling me about other studies that have been carried out on MMR overseas and in the UK.

The practice nurse was very helpful. She said she had been convinced of the safety of the MMR since joining the practice and had had her own daughter vaccinated.

Whether or not professionals choose to divulge – and some do not, on principle – it seems that for many parents, such lines of questioning usefully shift the interaction to a more personal register. The discussion comes to be about real, actual children, rather than the 'dry statistics' and 'whole populations' that some complain dominate professional advice:

The medical profession takes a wide view of the issue along the lines of public health. My decision was about my own children's health.

This more personalized framing of interaction is, perhaps, one which better allows parents to voice and discuss their particular concerns about their individual children – concerns which as we showed earlier are central to parental framings of vaccination safety. Indeed, it may be this desire for more personally focused discussions, as well as for reliable advice, that leads many parents to seek out and value advice from health professionals who are also relatives or friends. Thus examples such as the following were strikingly common in parents' responses:

I spoke to other mothers with jobs in medicine. They happily immunized their sons.

We talked to people we believed to be informed – a relative who is a nurse, our GP – as well as reading as much as we could.

My next door neighbour is a doctor and she makes a point of telling other Mums that her son has had the MMR. I think this would work. Real people who know their stuff telling others as examples.

> *A friend is a midwife and she provided me with an informative study article documenting the experience and use of MMR worldwide. I felt much better giving the injection knowing it was in use in Scandinavian countries and the USA over many years.*

One wonders whether the article mentioned above would have been so trusted had it been given out by a GP or health visitor who was not also a friend. These examples show how the source of advice can be more significant than its evidential content. A 'medical expert' who is also a friend or relative is experienced as more approachable, and 'on one's side'.

When talking about their interactions with both health professionals and others (peers, family) that they might have consulted about MMR, 'supportive' and 'unsupportive' were words that cropped up frequently. Support in the difficult process of thinking the issue through, or support in sticking to and carrying through a decision already made, are particularly valued by parents regardless of whether their tendencies lean towards MMR acceptance, rejection or delay. Some mothers actively choose between health professionals, seeking out those who will support their particular perspective on vaccination. Such an egalitarian engagement premised on common concerns is often highly valued. For some, with less firmly held views, having a supportive health professional lends momentum to the process of research, of coming to a decision and of acquiring confidence in one's judgement.

Parents' interactions with alternative therapists, too, often seemed to be as important for such confidence-building, as for the content of the advice offered. In mothers' survey responses concerning homeopaths, it is the process of support for a decision that is paramount, whichever way that decision eventually goes:

> *My homeopath provided me with lots of information giving ongoing support and advice which instilled confidence in me to further question the issues surrounding MMR and make the right decision for my child.*

> *Discussions with a homeopath about vaccinations gave me confidence about the course of action taken.*

> *My homeopath confirmed my thinking.*

In short, frontline health workers are not simply acting as conduits to communicate national vaccination and public health perspectives to parents. Rather, their situations as brokers are far more complex, involving negotiations of their own uncertainties and institutional imperatives, with the diverse parental worlds they encounter. Parents relate to, and sometimes actively seek, health professionals in ways that are shaped both by broad relations of power and perceived hierarchy, and by kinship and personal relations. Encounters with professionals sometimes involve knowledge and information about vaccination – whether biomedical or not. Yet it is often less the knowledge dimensions of an encounter, than the way relating to a professional builds or undermines confidence, which shapes parental decisions about vaccination for their child.

Vaccination and changing political philosophies

We have highlighted, then, ways in which views of the body, its immunity and the impact of vaccinations are not independent of experience and reflections on the social and wider political world. To understand further the nature of current anxieties about vaccination, it is important to consider how transformations in political traditions are playing into parents' thinking about vaccination and child health – while contrasting with technocracies of public health.

The emphasis on individual choice in relation to vaccination that pervades parental narratives has, we suggest, been co-produced with a wider political context in Britain that also emphasizes active choice – and a shift towards a liberal politic of choice, extending far beyond health care into other domains of life. This attention to personal choice is accentuated by the highly personalized perspectives on a child's particular immunity, in contrast with earlier perspectives on pubic and social hygiene, and moral virtues of cleanliness and civilization. The lens of immunity thus enables the person to become a liberal subject in body as much as mind.

Yet the technocracy that plans, organizes and delivers vaccination has its roots in an earlier ethic of public health, and in more assertive social planning. Moreover, as a technocracy, it must continue to emphasize 'the herd'. This contrast is resulting in a clash of discourses of governmentality. As one health visitor jokingly lamented:

> *We are constantly pushing active, decision-making parenting, sometimes against the odds – yet for vaccination, we sometimes wish people would just passively comply! (Health visitor, Brighton, February 2003).*

Public health regimes were important to the ways in which nation states developed in the 18th and 19th centuries, bolstered in their capacity to address infectious diseases such as cholera and smallpox, and undergird the civic infrastructural revolution (Porter, 1999). The political vision of an organizing government continued on in Europe and the US into the 1920s and 1930s, somewhere between its extreme forms of socialist command economy, and fascism. It extended into wartime and colonial planning that itself extended on into the 1950s. As discussed earlier, metaphors of strength and protection aligned with discourses of strong, protective states. Hardy (2006) argues that the period when mass childhood immunization was introduced on a large scale in the UK, in the 1960s, shortly after the founding and building of the National Health Service, coincided with this mood of confidence in public institutions involved with health delivery. There was, at this time, a sense of 'contract' in which people could expect their own and their children's health to be safeguarded, and that in turn they would uphold the collective responsibilities involved in adhering to public health programmes such as immunization and blood banking through gift. In this respect, in having a child vaccinated, individuals contributed to a mutually constituted social as well as a private 'good'. Hardy argues further that in this period 'the therapeutic revolution ushered in by penicillin, and the extension of mother and baby clinics under the new health service arrangements,

also contributed to make Britain a society that accepted immunizations' (2006, p5). Thus it was not just the efficacy of the polio and other immunizations, but a sense of public, collective responsibility associated with it, that provided a receptive context for the introduction of mass childhood immunization. It is this conjuncture that enabled vaccination to become a 'routinized' part of normal parenting.

While these political assumptions endure for some areas of society and government, other political philosophies have emerged as government cedes to governance and an acceptance of and adaptation to more individualized desires. Political ideals of localized, deliberative democracy, and social ideals of multiculturalism contrast strongly with those of the UK at the height of its empire. A world of jobs-for-life has ceded to ideas of every individual's life as an enterprise in which one is continually employed, re-skilling and taking 'care of the self' in relation to work, associated with a new psychological culture emphasizing self-realization, self-awareness and performance (Gordon, 1991, p44).

Moreover in the UK since the 1990s, reforms in the health sector have been advocating greater individual decision making and patient choice, as part of the wider consumer-choice agenda promoted by the 'New Labour' government. Notions of individual responsibility, risk awareness, legal recourse and insurance (values central to the 'risk society' (Beck, 1992)), have been actively promoted as part of the moral framework for this agenda. The government has sought to promote these values at the expense of more 'traditional' sources of authority – notably in the professions and civil service – drawing in sociologists such as Anthony Giddens and Ulrich Beck as part of their advisory networks. Moreover, as Fitzpatrick (2004) argues, politics in Britain itself focused more on personal issues, encouraging the politicization of health, lifestyle, family relationships and childrearing practices. The same is true of the media. And around these issues, the state is increasingly encouraging 'responsible' citizens who self-govern their health, behaviour and lifestyles (Barry et al, 1996).

In this context, the emphasis on vaccination to maintain health at the population level has come to exist in tension with the citizen's individual right to pursue their own health (or that of their child). As long as vaccination is deemed by a parent to be in their child's best individual interest, then there is little conflict between these perspectives, but should a vaccine become associated with potential harm, then these principles diverge. The MMR issue, and instances where parents believe that because of their child's particular constitution a vaccine would be damaging to them, brought this fundamental tension between individual and public health objectives into sharp focus.

This tension has become all the more apparent for other reasons. First, medical science is discerning ever more the importance of individual variation and medical interactive effects in determining the efficacy and side effects of medications. Such emphases have been amplified in the media, and in the many popular lifestyle and health books, magazines and supplements that exist to help craft individuals' health. A person is not the public writ small.

Second, another often cited reason for these shifts in the relationships between individuals and the state over public issues involving science is that 'command'

technocracies have proven both fallible and compromised in their links with the private sector. Some major scandals, such as the case of the emergence of Bovine Spongiform Encephalopathy (BSE) and the recognition in 1996 that it could be passed to humans in the form of 'variant' Creutzfeldt-Jakob Disease (CJD), have fuelled suspicion of government and scientific institutions more broadly. As Van Zwanenberg and Millstone (2003) have shown, in the BSE affair the Ministry of Agriculture, Fisheries and Food (MAFF) appeared to the public to have been intentionally misleading them. They held to a technocratic narrative that the knowledge and science surrounding BSE/CJD was undoubted and not clouded by uncertainty; one which supported their core economic and political agenda of shoring up the viability of the British beef industry. Being locked into this narrative made it difficult for MAFF to revise its views as challenging evidence emerged: 'Low cost steps ... were avoided, partly to avoid damaging the competitiveness of the meat trade, but also to sustain the illusion of zero risk' (Van Zwanenberg and Millstone, 2003, p34). So when the UK government finally acknowledged the dangers of BSE to human health in 1996, MAFF appeared to have been lying to the public.

Yet in our interviews, many fewer parents than we anticipated mentioned the controversies over BSE – or others, such as over genetically modified foods or mobile phones – in the UK as influencing their worries over MMR. Indeed several actively denied any link:

> Have you been worried by any of the scandals about food that were reported in the papers?
> *No, no (affirmatively), BSE! I was told that I was a mad cow anyway. It doesn't bother me (Mother, Brighton, April 2003).*

Views of government and the ways it handles scientific issues thus came over as less relevant than mothers' personal confidence in their decision-making process. In short, parental celebration of informed choice appears predicated on a form of personal responsibility that implicitly takes governmental fallibility into account. This acceptance of personal responsibility is manifest in the recurring statement 'I couldn't forgive myself if my child became autistic'; or inversely, '... if my child developed complications from measles'. In short, people's contemporary anxieties about state-led technocracies reflect the emergence of individuated perspectives and political philosophies surrounding health, lifestyle and choice that are rooted far more deeply than are a few instances of government reputational damage.

Conclusions: the dialogics of engagement over MMR

When reacting to the decline in parental uptake of the MMR vaccination, the UK Department of Health established an information campaign which focused on 'sound science', the 'social good' and a true appreciation of the balance of

risk. These values were expressed in a suite of publications and web-based information aimed at parents and health professionals (e.g. NHS, 2002a, 2002b, 2004), and later at both combined. Yet the 'sound science' and the balance of risk were expressed in relation to population-level epidemiological studies, and were thus of little use to parents who were assessing the risk in relation to 'their child'. Equally, arguments concerning the 'social good' highlighted reasoning in relation to 'the herd' – although publicity also highlighted how certain children could not tolerate vaccination, and only herd immunity could protect such children from these diseases. The publicity thus found limited traction with large sections of the public who conceptualized vaccination risk in more personalized terms, and wanted to make personalized choices about it.

In as much as people appeared not to follow advice, the public health reaction was often to presume that the public remained ignorant or misled about risks, and to pursue education campaigns with greater force. In this, the DH was encouraged by the findings of its own attitudinal surveys, that it regularly commissions in random locations across the UK. Focusing narrowly on parents' perceptions of the benefits and risks of immunizations, and sources of information about these, these surveys at the height of the MMR controversy seemed to suggest that the DH approach was working. Thus interpreting the survey findings, Ramsay et al (2002) indicated that 67 per cent of mothers perceived the MMR as safe or to carry only slight risk. They concluded that:

> *the fall in MMR coverage has been relatively small, mothers' attitudes to MMR remain positive, and most continue to seek advice on immunization from health professionals. As the vast majority of mothers are willing to have future children fully immunized, we believe that health professionals should be able to use the available scientific evidence to help to maintain MMR coverage (Ramsay et al, 2002, p912).*

Pareek and Pattinson (2000) surveyed attitudes and beliefs in a similar way, with similar findings and conclusions. Such studies helped to support an interpretation of parental demands for 'choice' as selfish freeriding, set against the public good of vaccination. Public discourses minimized and marginalized those who did not comply with the expected MMR schedule, characterizing them as newly irrational middle classes, misled by inappropriate media coverage and amplification. A view was taken that once the media quietened down, the MMR controversy would blow over – a view that drew on the historical resurgence of parental uptake following the controversy over pertussis vaccine in the UK in the late 1970s (e.g. Yarwood, 2007). Such arguments tended, overall, to reinforce the idea of a compliant mass, and the logic of a public health model that relies on this.

Yet as publicity campaigns unfolded, parents' rather different views in Brighton, at least, appear to have become reinforced. The generic information on science and risk was read as too abstract and coarse to relate to particular children, and as insensitive to parental perspectives. Hence the tendency was to withdraw from this into further personal research in other arenas, heightening a sense of personal responsibility. Many parents found the public health technocracy to be too

inflexible to accommodate their interests. The DH was, in effect, promoting and reinforcing a view that 'there is one system, and we'll stick to it', in a world where 'one size fits all' approaches were considered with suspicion. The withdrawal of access to single vaccines so that parents could only seek these privately (and as we have seen, many did – although this did not show up on government child health records), and the DH's refusal to offer either these or flexible vaccination schedules, was interpreted by parents as reflecting a technocracy that was out of touch, and pursuing other political and economic interests. Issues that emerged in critical public discourse turned on the financial logics of an uncaring state (exemplified in the financial incentives that doctors receive when vaccination thresholds are achieved), and the shadowy world of pharmaceutical companies, their influence on medical research results and penetration of government departments.

Thus what emerged was an unfolding 'stand off', or indeed, a dialectical widening of the gulf between parents and the DH as the arguments of each, premised on conceptually incompatible framings, played out in articulation with each other. Views central to the science of public health are written into a particular version of government, and a particular view of society (of social immunity) and of the body (of vaccines with generic effects on the body, suggesting a person as population writ small). These now encounter a very different, but equally embedded set of views which conceptually coordinate across views of government (decentralized, responsive), of society (of respect for individual choice and responsibility) and of the body (of personal immunity). Crucially, the interactions configured by these contrasting framings have served to shape both. It is this dynamic, we argue, that lies at the heart of vaccine anxieties and problems in vaccination delivery in the UK today.

Certainly, parents remain deeply anxious for the health of their children in ways that can and often do encompass positive evaluation of vaccines and their effects. Such positive anxieties are often framed in relation to ideas of a child's strength, vulnerability and personalized immunity, and as part of a repertoire of personal health and parenting choices that might encompass alternative medicine and nutrition as well as biomedicine. Such evaluations emerge from parents' experiential expertise – in this case that knowledge that comes from daily observation and interaction with particular children on whom parents and everyday carers are clearly, in many respects, experts. In the context of parents' knowledge and expertise – gained and maintained in interaction with a diversity of other experts – those who do not accept prescribed vaccination schedules should be seen neither as ignorant, nor, necessarily, as 'resisting' in a negative sense. Rather, such parents are often following positive, informed strategies geared to the health of their child; strategies which sometimes include vaccination but wish it timed differently, or which understand its effects in personalized ways. In short, vaccination, as a technology, acquires different meanings when framed as part of personalized pathways of child health, than when framed as part of the technocracy of mass childhood immunization. Yet it is such meanings, as this chapter has tried to show, that are crucial to understanding parents' practices and desires.

Notes

1 Michael Poltorak played central roles in the ethnographic fieldwork and survey in Brighton, and was lead author of an earlier joint article (Poltorak et al, 2005) on which this chapter draws.

2 The sampling frame for the survey consisted of all children aged 15–24 months listed in the Child Health Dataset held by South Downs Health NHS Trust as resident in the catchment of Brighton and Hove City PCT, in early March 2004. Children were categorized into those who had and had not had an MMR immunization recorded, and of the 1800 children eligible, a sample of 1000 MMR uptakers and non-uptakers in a ratio of 1:1 was randomly drawn, using the statistical programme STATA™ Version 8. All the 135 registered children who had had no vaccination events recorded were also sampled. A postal questionnaire addressed to the mother or guardian of each child was sent in March 2004. This contained a questionnaire for the mother, and also one to be passed where possible to the father of the child. A follow-up letter with a second questionnaire was sent after 3–4 weeks to non-responders, with the exception of children who had had no vaccinations recorded, due to late receipt of the data needed for sampling.

3 This shift is by no means total. Indeed in the early 21st century advocates of highly generalized, strict, routine-based childcare regimes (e.g. Ford, 2001) have enjoyed a renewed popularity, perhaps in the context of the pressures that many parents now feel to regularize childcare routines around contemporary work demands.

4 These are pseudonyms, as are all other parents' and children's names cited in this book.

5 The term 'immune system' was first used within science only as late as 1967, when it was introduced as a way of holding together two contending strands of immunology: that emphasizing the action of specialized cells (lymphocytes) in fighting off infection, and that emphasizing the role of antibodies (Moulin, 1989).

6 JABS (Justice, Awareness and Basic Support, www.jabs.org.uk) and The Informed Parent (www.informedparent.co.uk) are both organizations claiming to offer 'objective' information, advice and support to parents in making decisions about vaccination. In practice their emphasis is as fora and channels for much information and discussion that questions vaccination, as well as support to parents who think their children have been damaged by vaccines – as we discuss further in the next chapter.