

# 5

## Mad Cows, Modern Plagues and Superbugs

From the 1990s onwards, there was an exponential increase in the media coverage of emerging infectious diseases. In the USA, there were several media scares following localized outbreaks of infectious diseases previously seen very rarely, or not at all. For instance, in 1993, the largest-known cryptosporidiosis outbreak occurred at water treatment plants in Milwaukee, Wisconsin, with an estimated 403,000 people affected and 54 deaths (Hewitt & Schmid, 2002). In 1995, several Texan youths contracted Dengue fever after a camping trip in a Mexican border town (Holtzclaw, 2002). In 1996, an outbreak of food poisoning caused by Guatemalan raspberries contaminated with *Cyclospora cayetanesis* affected 1,465 people in the USA and Canada (Lashley, 2002). Most famously, in 1999, an outbreak of West Nile virus occurred in New York, the first identification of the disease in the Western hemisphere.

The discussion here, however, focuses on other diseases that gained particular significance and came to epitomise the new EID category. The first of these was so-called 'mad cow disease', which in 1996 was linked to disease in humans. At around the same time, a 'far-flung' epidemic of Ebola garnered a huge amount of media interest. Through the 1990s and early 2000s, the issue of 'superbugs' gained momentum in both political and media circles. The late 1990s also saw increasing attention focused on the risk of a potential global pandemic of highly pathogenic avian influenza (HPAI) from the H5N1 strain of influenza originating in South East Asia. However, it was SARS, rather than H5N1, that caused global panic in 2003. Reportage of these various new diseases aggregated these stories (as 'emerging' diseases), and this cumulative effect led to a 'ratcheting up' of the risk discourse around them, as well as an increasing tendency to scapegoat and blame.

## 'Mad cow disease'

The 'mad cow disease' story began in April 1985 when a cow on a farm in southeast England became aggressive and developed problems with co-ordination. Despite various attempts at treatment, the animal died – as did seven more cows with similar symptoms on the same farm over the following 18 months. By 1987, similar cases had been confirmed in four other English herds, and the British journal *The Veterinary Record* published the first report of what was by then called bovine spongiform encephalopathy (BSE).

In 1988, as the number of cases continued to rise, the British government established the Southwood Committee to examine the problem. The committee concluded that BSE had its origins in a similar disease in sheep – scrapie – and had been transmitted to cattle through the practice of feeding them 'ruminant-based protein' (processed meat and bone from sheep and cattle). The use of such feeds was banned in May 1988, a measure that at the time was taken to protect animal health. The committee also recommended that BSE-infected animals should be compulsorily slaughtered and their carcasses destroyed. Farmers were to be paid 50 per cent of the market value of the animal, on the basis that a diseased cow was worth less than a healthy one.

Only in February 1990 did the government increase the compensation to full market price. Immediately, reported cases leapt by 75 per cent, evidence that, prior to this time, farmers had been sending diseased cows to market and thus into the human food chain (Weir & Beetham, 1998). In 1989, measures were introduced to exclude the most highly infective cattle organs and tissues from cattle older than six months from the human food chain. In the same year, the European Union (EU) restricted exports of cattle from Britain, the first of a number of restrictions placed on the export of cattle and beef.

The BSE crisis emerged at the end of a decade in which the credibility of the British government was already severely dented following several other food policy scandals (Lang, 1998). One of these was a rise in cases of food poisoning caused by a new, more virulent form of salmonella in eggs, which led to the resignation of a junior minister, Edwina Currie, after she said on television that 'most of the egg production in this country, sadly, is now infected with salmonella'. An inquiry followed, one of the outcomes of which was introduction of a new Food Safety Act in 1990 (Pennington, 2003).

Before 1990, there were very few reports about BSE in the British newspapers, and those occasional stories were usually confined to the science

pages of the quality press (Gregory & Miller, 1998). These rare reports usually framed the new disease either as on a par with the salmonella scare – unpleasant, but not life-threatening for most people – or in terms of scrapie, a disease present for many hundreds of years in British sheep and yet one that did not pose a risk to human health (Washer, 2006).

The British news coverage of the BSE story first spiked in March 1990, when a domestic Siamese cat in Bristol was confirmed to have died of a ‘scrapie-like’ spongiform encephalopathy. Up to that point, the British government’s line had been that BSE in cows was a derivative of scrapie. Yet although animals such as goats were susceptible to scrapie, cats were not, hence the ability of BSE to jump species to a cat was regarded as a cause for concern. During the following months, evidence began to accumulate for the incidence of spongiform encephalopathies in increasing numbers of animals, particularly zoo animals fed on meat and bonemeal (Lacey, 1994).

The British government attempted to divert attention from the crisis by trying to discredit dissenting opinion as scaremongering, and by vilifying scientists who argued that in the light of the mounting evidence what would later become known as ‘the precautionary principle’ should be applied to British beef. The government also shifted the blame for the collapse of the beef industry onto Europe. One of the most memorable images of the BSE story was a photo opportunity in which Agriculture Minister, John Gummer, fed a burger to his four-year-old daughter, Cordelia, in an effort to reassure the public. Such reassurances failed to satisfy other European states, who promptly banned British beef.

The British press, following the line set by the government, soon moved the debate away from the potential threat to health, focusing instead on the European ban and the government campaign against it (Miller, 1999). From its peak in the middle of 1990, media coverage declined, partly because the EU decided to allow British beef from certified BSE-free herds to re-enter the European market. Through the early 1990s, the British government attempted to banish doubts as to the safety of eating British beef to a degree that was ‘politically stupid’ (Lang, 1998).

In January 1994, a documentary was screened on British television about 15-year-old Victoria Rimmer, who was dying of Creutzfeldt-Jakob disease (CJD) (she died in 1996 aged 18). By the end of 1995, a further 11 possible cases in people under 50 years of age had been referred to the British health authorities. Eight turned out to have a new variant of Creutzfeldt-Jakob disease (vCJD). Whereas sporadic CJD is normally

quite variable in symptoms and in the pattern of damage to the brain, these new cases were strikingly similar to each other. The vCJD cases also showed damage to similar areas of the brain as was found in cows with BSE (Dealler, 1996). In 1994, 18-year-old Stephen Churchill became the first to die of vCJD, although the cause of his death was not confirmed until the following year (Weir & Beetham, 1998).

After ten years of refusing to admit to any risk to the health of the public, the weight of evidence of a link between eating BSE-infected beef and contracting vCJD became too great for the government to deny any longer. On 20 March 1996, the Minister of Health, Stephen Dorrell, announced to Parliament that there was a 'probable' link between BSE and recent cases of vCJD in young people. The announcement caused a public outcry and a political crisis for the British government.

In the aftermath of the incident, the media was initially saturated with human interest stories about people who had contracted 'mad cow disease'. The most terrifying diseases are often those perceived not just as lethal but as literally dehumanising. In nineteenth-century France, for example, actual cases of rabies were both rare and inevitably fatal (before Pasteur's discovery of its cause). However, the rabies phobia that gripped people during this period involved countless pseudo-cases of infection by animals newly turned 'bestial', and even of 'spontaneous' rabies. There was a myth that rabies infection transformed people into maddened animals, unleashing uncontrollable sexual and blasphemous impulses (Sontag, 1989). A similar fear of becoming like a maddened, rabid animal pervades the coverage of 'mad cow disease' in 1996. Descriptions of the physical and mental decline of the young people who succumbed to the disease, juxtaposed with images of uncoordinated and frightened cows, made a clear link between the mad cow animal and the *once human being* (Washer, 2006).

Yet as in 1990, as the British beef industry collapsed, soon the emphasis of the British government and media again shifted away from the threat to human health and onto the European reaction and its threat to the domestic economy. The Conservative government of Mrs Thatcher, already intensely antagonistic to the EU, was furious at the bans on British beef, which it saw as a mask for protectionism of European beef markets.

The British C/conservative nationalism about beef was also related to the notion of beef as a traditional emblem of Britishness and a significant staple of the British diet, as in, for example, the traditional family ritual of the Sunday joint of roast beef and Yorkshire pudding. Other cultural identifiers include the 'Beefeaters' who guard the Tower of London,

and the French nickname for the British: *les rosbifs* (Hinchliffe, 2000). Thus the attack on British beef by the French and Germans, of all people, was viewed by many as a continuation of centuries of mutual hostility. BSE therefore provoked a further deterioration in relationships between the UK and other EU member states.

Although the British reaction to the EU ban could be seen as xenophobic anachronism, the reactions of the Europeans were little better. For (continental) Europeans, the BSE story only confirmed their worst stereotypes about terrible British food. As noted in the previous chapter, one way to distance the threat posed by a new epidemic is to blame *others* because 'they eat disgusting food'. Politicians in the EU addressed the problem of BSE as if it stood for *British* rather than *Bovine* Spongiform Encephalopathy (Brookes, 1999). Media coverage of the issue in the USA similarly depicted BSE as rooted in stuffy British identity and 'unnatural' norms. One ubiquitous pun used to distance the American reader from the BSE crisis was 'mad cows and Englishmen'. The British 'overindulgent' taste for beef was contrasted with 'not excessive' and 'healthy' American consumption of beef (Demko, 1998). From outside Britain, BSE was thus depicted as a problem for *others*, and not one that could happen 'over here'. (In 2003, BSE was found in cattle in Canada, and in the USA in a cow originating from Canada. The USA banned Canadian beef and cattle, and similar bans followed in Japan, South Korea and Taiwan (Broadway, 2008), causing major financial repercussions for Canada's farmers.)

If people outside Britain could blame BSE/vCJD on disgusting British food and 'excessive' British consumption of beef, what of the British themselves? The problem could not be distanced in the same way, as its origins were undeniably domestic. In Mary Douglas's terms, instead of the blame being directed *outwards* to *others*, the focus of blame for the British was directed *upwards* to privileged elites. The blame was placed unequivocally at the door of *our leaders* – the Conservative government – who for over ten years had reassured the British public that beef was safe to eat.

Another strand of this criticism related to the impropriety of the links between the Conservative Party and the farming and food lobbies. The National Farmers Union was an entrenched interest group in British government and policy-making; supposedly 'watchdog' bodies were dominated by members of Parliament with rural and farming interests (Weir & Beetham, 1998); there were several large-scale farmers in the Tory Cabinet and active in local Conservative constituency associations;

and many large food producers had also been generous donors to the Conservative Party (Grant, 1997).

As well as being directed upwards to *our leaders*, the blame for BSE/vCJD was also widely attributed to 'modern' farming methods, and in particular the practice of making carnivores of herbivores. In fact, the practice of feeding meat and bone meal to animals in Britain is not terribly 'modern' and dates back to at least the 1920s (The BSE Inquiry 2000). The term 'mad cow disease' was coined by David Brown, a journalist on the right-leaning broadsheet the *Daily Telegraph* (Gardner, 2008), although by May 1989 it had already begun to appear alongside 'BSE' in newspaper reports in both broadsheet and tabloid newspapers. The term clearly captured the *zeitgeist*, describing the 'mad' behaviour of the cows, as well as drawing on the metaphor of rabid 'mad dogs'. This image contrasts with the more customary images of cows, for example in children's stories or English pantomimes, where they are usually represented as placid and docile creatures.

In a certain sense, the 'madness' here refers not (only) to the diseased cattle, but also to a wider malaise of modernity (Leach, 1998). In Western societies, certain classes of animals – pets, primates and carnivores – are not considered food. The prohibition on eating carnivores may possibly stem from the fact that they potentially, albeit rarely, eat humans. The idea of incorporating an animal that may have itself incorporated human flesh is repugnant to Western sensibilities. From a Western perspective, 'primitive' peoples who eat what is considered 'non-food' – dogs, cats, monkeys – are marked as less 'civilised' and animalistic (Tiffin, 2007).

This horror also intersects with a contemporary discourse that condemns the mixing of genes from different species in genetically modified (GM) food. Eating cows that have been made carnivorous, and thus eating what is usually classified as non-food, is condemned as 'unnatural', as is the GM mixing of different categories. This echoes the food prohibitions of The Book of Leviticus (discussed in more detail in the following chapter), which classify certain things as unclean and not to be eaten, and condemns as unholy the confusion or mixing of different classes of foods (Scholten, 2007). There was thus a certain Biblical feel to the media descriptions of BSE as a punishment for 'unnatural' modern farming methods, for breaking a taboo by making 'cannibals' of cows.

As well as having echoes of the breaking of ancient taboos, 'mad cow disease' also seems a model *Risk Society* issue of late modernity. BSE was unbounded temporally in the Beckian sense, insofar as the prion

proteins causing the disease persisted in the soil and resisted the normal sterilisation techniques used for surgical instruments. The risk was also unquantifiable, insofar as the consequences for human health from eating beef were very difficult to judge: epidemiological predictions of the scale of a vCJD epidemic at the time ranged from less than 100 to several million cases (Collinge, 1999).

Interestingly, although AIDS was an enormous media story in the UK when BSE was first reported around 1986, no links were made between the two diseases at the time. Only after the announcement of the BSE/vCJD link was made a decade later did the media frame for BSE change from salmonella to AIDS ('this could be *the next plague*', 'an epidemic on the scale of AIDS', etc). While the use of salmonella and scrapie to frame BSE in the early coverage acted to reassure and diminish the seriousness of the potential threat, the effect of the later framing of vCJD in terms of AIDS worked in precisely the opposite direction, amplifying the seriousness of the risk and the sense of fear (Washer, 2006).

BSE also seems a model *Risk Society* concern in that it necessitated dependency on expert judgement of the safety of beef, as BSE-infected meat did not look or smell any different from safe beef (Hinchliffe, 2000). Yet at the same time that very trust in expert opinion was damaged by the uncertainty and prevarication surrounding the communication of the risk.

Up to August 2009, there were 214 cases of confirmed vCJD, with 164 deaths, including three Britons who contracted the disease from blood transfusions. The majority of the cases were in Britain (165) and France (25), although cases were also diagnosed in other European countries, with three in the USA and one each in Canada, Japan and Saudi Arabia (The National Creutzfeldt-Jakob Disease Surveillance Unit, 2009). Media interest in 'mad cow disease' eventually waned, particularly in light of the growing newsworthiness of other EID.

Although the predicted epidemic of millions did not materialise, the story occasionally resurfaced in light of new scientific and epidemiological data, which indicated that the epidemic might already have spread, or had the potential to spread further. In 2004, for example, scientists announced that they had found the infectious agent of vCJD in a patient who had no signs of vCJD and who had died from an unrelated condition. He was thought to have been infected by a blood transfusion from a person who later developed vCJD. This suggested that as well as those previously known to have a susceptible genetic make-up, people with different gene types might also be vulnerable after a longer period of incubation (Peden et al., 2004).

## Ebola

Around the same time that the link between BSE and vCJD was being announced, Ebola had resurfaced in Africa. As described in Chapter 1, 1976 saw the first reports of a 'new' disease, Ebola haemorrhagic fever, in the Sudan and Zaire. A second epidemic of Ebola in 1995–6 in Kikwit, Zaire, infected 316 people and caused 245 deaths. The first outbreak occurred before AIDS and the coining of the EID category; and before both Richard Preston and Laurie Garrett had brought the spectre of Ebola to public attention with their popular science books. While the first epidemic was largely ignored by the world's media, the second Ebola epidemic caused a media frenzy.

In his analysis of media coverage of EID, Ungar (1998) points out that the reporting usually follows a particular pattern, which he calls the *mutation-contagion* package. This is composed of the following core ideas:

- that *microbes are on the rampage* and that we are experiencing a 'wave of new assailants';
- that *microbes are cleverer than us* and, in a reversal of the idea that infectious diseases can be conquered, they are evolving to 'outwit us';
- that microbes and the environment are conjoined in an 'ecological parable' – arising from man-made issues such as population growth and antibiotic overuse;
- that *microbes know no boundaries* in a globalised world;
- and *that we are waiting for the next plague*.

This package is constructed around a frightening core of images and metaphors with little to reassure. However, the sense of threat is hypothetical, as the diseases remain abstract and affect geographically distant or marginal populations. At the same time, the reporting promises that 'medical progress' will contain and offset the threat, presenting a stream of 'amazing new discoveries'.

Ungar argues that the reporting of the 1996 Ebola epidemic in the Canadian, US and British media embodied many of the most terrifying aspects of this *mutation-contagion* package: a monster virus on a potential rampage, coming from 'elsewhere' and fitting the ecological parable. *All* of the media coverage paired Ebola with the words 'killer' or 'deadly', and almost all included descriptions of liquefying organs and profuse bleeding. While still distant for Western readers, Ebola was characterised as a harbinger of a possible wider pandemic. One feature of the Ebola

reporting was the idea that the disease could be transported to Western countries in the bodies of those infected but without symptoms – the so-called *stepping off a plane scenario*. Yet very early on, the reporting changed to the *containment* package, ‘erected on the metaphor of *otherness*’, which diffused the potential panic. The exemplary protective methods of the Western experts were contrasted with the ‘appalling sanitary conditions’ of African hospitals. The focus of the threat was thus shifted from the virus itself to Africa’s hospitals. After a few days, there was a further shift in the coverage, as attention was given to Western health teams – disease detectives – whose presence was contrasted with the chaos in Zaire. By this point Ebola was treated not as a rampaging virus, but rather as a disease that was difficult to catch. In particular, the *stepping off a plane scenario* was undermined, as journalists began to report that people with Ebola were not infectious until ill, and then unlikely to be travelling by plane (Ungar, 1998).

In the British newspapers, almost half of the coverage of the same Ebola outbreak linked the disease to monkeys or to the lack of appropriate African medical facilities. Beyond this, other factors implicated in the spread of Ebola were poverty, pollution, the forest environment and tribal rituals. By symbolising Ebola as essential to Africa as a whole, the coverage implied that such disasters were ‘incontrovertibly African’. Africa was depicted as inevitably disaster-ridden, and the West, by implication, as superior. Ebola was compared with AIDS, with terrifying and horrific vivid descriptions of liquefying bodies. Readers were subsequently reassured with references to methods of containment of the virus by Western medical science. As with the coverage of African AIDS, the British media gave the impression of Africa as a ‘cradle and hotbed’ of disease, the ‘dark continent’ beset by famines, pestilence and primitive and perverse sexuality. Thus what the British readers already ‘knew’ about African AIDS led them to view Ebola in a detached way, by connecting it with the *other* (Joffe & Haarhoff, 2002).

As had been the case with AIDS in Africa, the Western news coverage of Ebola was pervaded by an emphasis on how the diseases could be brought under control only by Western science and Western doctors. At the same time coverage rarely gave Africans a voice, or alluded to the role they played. One rare study that does explore the views of people affected by Ebola examined how local residents viewed and responded to a later outbreak in 2000–2001 Ebola in Gulu, Uganda, one of the largest occurrences to date, with 425 presumed cases and 224 deaths (Hewlett & Amola, 2003).

The local Acholi people used three explanatory models to explain and respond to the Ebola 2001 outbreak. Initially, most families thought the symptoms of Ebola were the result of a bacterial infection or malaria and went to hospital seeking Western biomedical treatment, a model that had existed in the area for over a century. Symptoms were often treated with both biomedical and indigenous cures, for example with herbs from traditional healers, deriving from the indigenous concept of *jok* – spirits or gods from whom traditional healers, *ajwaka*, obtained their powers. As the symptoms continued, and the numbers of deaths began to grow, people realised that this outbreak was unusual and began to classify it using a third model – *gemo* – which in local folk belief was a mysterious bad spirit. Once an illness had been categorised as a *gemo*, a killer epidemic, the family were advised to quarantine the patient. The patient was moved to a marked house at least 100 metres from other houses, no visitors were allowed, everyone's movements were limited, and only survivors of the same illness were allowed to care for them. If the patient recovered, they had to wait a full lunar cycle before being allowed back into the village. If they died they were buried at the edge of the village (Hewlett & Amola, 2003).

Despite their similarity to Western biomedical notions of epidemic control, Acholi elders were adamant that these practices preceded contact with Westerners in the late 1800s. Thus indigenous epidemic control measures were consistent with those being promoted by Western healthcare workers. Although some cultural practices, such as those surrounding burial, did amplify the Ebola outbreak, most people were willing to modify these and co-operate with Western healthcare workers. WHO staff were concerned that local people with symptoms of Ebola were not coming to the hospital, and believed that it was because they were afraid of being buried there and not in their village if they died. However, locals ran from the ambulances not because they were afraid of being buried outside the village, which would have happened in their indigenous system, but because they were suspicious of white people, whom they commonly believed were buying and selling and body parts (Hewlett & Amola, 2003).

### 'Superbugs'

By the middle of the 1990s the emergence of 'superbugs' was also beginning to gain increasing media attention. Occasional flurries of media reporting thus followed stories such as 'flesh-eating bacteria' (Gwyn, 1999) or the diarrhoea-causing 'new superbug' *Clostridium difficile*

(Duerden, 2007). However, it was MRSA in particular that would become almost synonymous with the moniker 'superbug'.

Countries such as Scandinavia and Holland have remained relatively free of MRSA because of prudent antibiotic prescribing restrictions. Similarly, in some developing countries, such as The Gambia, there are low rates of resistance due to reduced access to antibiotics. However, in others, such as Senegal, Nigeria and Vietnam, the unrestricted sale and use of antibiotics has led to antibiotic-resistant strains of bacteria (Farrar & Adegbola, 2005). Many hospitals in the tropics are like those in the 'pre-penicillin era', yet have a high prevalence of the antibiotic resistant bacteria of the twenty-first century (Shears, 2007). In the USA, the appearance of community-acquired MRSA (cMRSA) has caused widespread concern. cMRSA is transmitted not in healthcare settings, but for example, via sports activities and children's daycare centres. In the USA, MRSA infections rose to a new high in 2005, up nearly 30 per cent in one year, with 369,000 cases reported, of which about 5 per cent resulted in death (Spurgeon, 2007).

However, it was in Britain, which has one of the highest MRSA infection rates in Europe, that the issue became intensely politicised in Britain from the late 1990s, and particularly in the lead-up to the 2005 General Election, during which politicians used the issue to argue that only their party would adequately fund and manage the British National Health Service (NHS).

Political attention in Britain was focused not on what caused MRSA to evolve, such as the overprescription of antibiotics, but on why it was spreading, particularly as a result of allegedly poor hygiene in hospitals (Department of Health, 2004; Jones, 2004). The media largely reflected this bias, suggesting that by improving hospital hygiene MRSA could be controlled. In fact, although staphylococci can be found on hospital floors and other surfaces, they do not grow there and will gradually die. Cleaning or disinfecting a floor has only a short-lived effect as recontamination will soon occur, often in about an hour. The main route by which hospital infections are spread is on the hands of staff (Ayliffe & English, 2003).

Although the British media did not connect MRSA in any concrete way to the overprescription of antibiotics (by doctors) the media blamed MRSA on 'our' squandering of the medical breakthrough of antibiotics. This fits with Beck's *Risk Society* thesis, insofar as one of the features of risks in late modernity is that they are said to be caused by the misuse of technology, in this case antibiotics. The 'golden age of medicine' narrative describes antibiotics as one of the most tangible benefits of modern

biomedical progress. In some respects, the MRSA coverage also fits with Ungar's (1998) model description of a *mutation-contagion* package above. However, in Ungar's model, the frightening 'bugs are evolving to outwit us' theme is offset with a promise of containment of the threat by way of 'medical progress'. In the media coverage of MRSA, there was no such promise of a medical solution for the problem, such as new antibiotics. The loss of faith in scientific medicine was evidenced by the numerous unconventional remedies reported in the media, of prophylactics that were said to protect against MRSA, or of homespun methods of 'boosting the immune system' (Washer & Joffe, 2006).

The metaphor 'superbug', like 'mad cow disease', makes concrete an abstract and invisible threat. Although the genesis of the term is unclear, it was used in the tabloids and broadsheet newspapers as early as 1985, originally in the context of stories about pesticides and the agricultural use of antibiotics. A widely publicised popular science book published in 1995 was called *Superbug: Nature's Revenge. Why Antibiotics Can Breed Disease* (Cannon, 1995). From about 1997 the term gained general currency and increasingly became synonymous with MRSA. Like 'mad cow disease', 'superbug' entered the lexicon and became widely used, even in political statements.

This begs the question: why 'super'? The origin of the word is from the Latin *supra*, meaning 'above' or 'beyond'. In idiomatic English, when combined with another word, 'super' means: 'to a great or extreme degree; extra large or of a higher kind, as in superstructure or superabundant'. Whereas in American English 'bug' can refer to insects, in British English 'bug' only usually refers to germs. Thus 'superbug' combines 'super' with 'bug' and implies singularity, as in *supermodel*; strength, as in *superpower*; and/or indestructibility, as in *superhero*. In the 'superbug' discourse, there are ordinary 'bugs', for example the 'good bacteria' that colonise our gut and keep us healthy (as discussed in the following chapter), and then there are *superbugs*. MRSA is thus understood as a phenomenon that is ubiquitous, invisible, threatening and unconquerable.

If 'superbug' expressed the power of MRSA, then the calls by politicians and the media to 'bring back matron' implied nostalgia for a time when antibiotics were effective in containing disease and hospitals were clean and safe. 'Matron' is an anachronistic and explicitly gendered term, carrying with it connotations of matriarch, matronly and so on. For a British reader, the term would also carry a whole series of connotations related to the *Carry On* comedy films of the 1960s. The regimented female authority figure of the matron seemed a safer bet to sort out

the MRSA crisis than the more neutral 'infection control nurse'. The matron figure symbolised a safe and trustworthy pair of hands for the NHS, with its associations of old-fashioned womanly hygiene, order and morality.

In the coverage of 'far-flung' diseases such as Ebola, and, as described below, SARS, there were graphic descriptions of the effects of the disease, but these tended to be impersonal ones: of liquefying bodies, lungs filling with fluid and so on. In the MRSA coverage, by contrast, there were many personal accounts of people's suffering as a result of the infection, including some of 'celebrity victims' who later become quasi-religious in their crusades against MRSA (Strong, 1990). The human interest factor in MRSA was constructed around an assumption that 'it could be you or me'. This human interest factor was not an intrinsic quality of the risk of MRSA, or of the 'flesh-eating bug' story, but was a construct related to journalists' perceptions of their audiences and their own identities (Kitzinger & Reilly, 1997). In other words, the journalists assumed that the plight of the human face given to MRSA would reflect and resonate with the audience and thus generate empathy.

This politicisation of MRSA recalls Mary Douglas' observation of how modern societies politicise risks by selection, whereas 'primitive' societies invent causal connections between natural events and moral transgressions, in order to cast blame. Like 'mad cow disease', 'superbugs' could not be represented as geographically distant from a British perspective, and unlike AIDS or Ebola superbugs did not only affect *others*. Thus the blaming/*othering* model seen in the distancing responses to other infectious diseases could not be applied in the case of MRSA. Instead, as with the 'mad cow disease', when the blame could not be directed outwards at *others* it was directed upwards to *our leaders* and thus became an issue in the 2005 election.

### 'Hong Kong' flu

The late 1990s also saw increasing global attention being turned toward South East Asia, and to what was considered an inevitable pandemic caused by a new strain of influenza which was expected to emerge from there.

All the influenza pandemics that have been traced to their source (since 1888) have been found to have their origins in China's Southern Guangdong (Canton) Province. This is attributed to the system of farming there, devised in the seventeenth century, in which rice farmers use ducks to keep flooded rice fields free of weeds and insects. As

the rice blossoms, the ducks are put on waterways and ponds, and, after harvesting, they are put back on the fields, where they eat the remaining grains of rice, and are thus fattened for the table (Kolata, 1999). The farmers also keep pigs alongside the ducks, and since pigs can be infected with both avian and human influenza strains, genetic material from avian strains of influenza is sometimes transferred to strains that are infectious to humans via swine by a process known as reassortment or antigenic shift.

The potential of avian influenza to infect humans is exacerbated by the practice of importing chickens into Hong Kong from mainland China, where they are kept alive in food markets and only slaughtered on the request of the customer when buying the chicken. This traditional ritual is maintained because the Chinese value the freshness of food (Joffe & Lee, 2004).

Influenza viruses continually circulate in humans and cause yearly winter epidemics, but novel strains emerge sporadically every ten to 40 years as influenza pandemics that can infect between 20 to 40 per cent of the world's population in a single year (Taubenberger et al., 2001). As noted in Chapter 2, the worst pandemic in recorded history, with a greater death toll than even the Black Death, was that of the 1918 'Spanish flu'. Further pandemics derived from avian influenza strains followed in 1957, when H2N2, or 'Asian flu', travelled east along the routes of the Trans-Siberian Railway from China and Hong Kong into the Soviet Union, and west by sea from Hong Kong to Singapore and Japan and soon after to the USA, where it remained prevalent for ten years. In 1968, a less severe pandemic of H3N2, 'Hong Kong flu', travelled a similar route to the 1957 pandemic, spreading outwards from Southeast Asia (Kitler et al., 2002).

Until 1997, there was no evidence that a wholly avian influenza virus could infect humans directly. However, in May of that year in Hong Kong, a previously healthy three-year-old boy died from H5N1 'bird flu'. The avian strain, which had not been genetically reassorted in swine, infected 18 people in the territory, killing six. Although the virus was not transmitted between people, in December the Hong Kong authorities decided to cull approximately 1.6 million live fowl within the city environs and to ban the import of live birds from Guangdong Province. In 2001, the virus was again found in poultry in Hong Kong, prompting another cull of about 1.3 million fowl and a further ban on imports (Cyranski, 2001).

In the years that followed, sporadic cases of H5N1 occurred in South East Asia, affecting birds and infecting humans, and there were more

human deaths in 2004 and 2005 in Thailand and Vietnam, prompting further culls of millions of poultry. However, the first probable human-to-human case of H5N1 transmission occurred in September 2004 in a Thai mother who had nursed her dying child. By 2005, although only just under 100 people had died of H5N1, avian influenza was an almost daily feature of the US news (Davis, 2005). For example, in 1997, the year of the Hong Kong bird cull, there were 165 articles on the subject published in US newspapers and wire services, yet by 2005, the number of articles published had grown to 8698 (Trust for America's Health, 2006).

By August 2009, there had been 440 cases reported of H5N1 in people around the world, of which 262 people had died, with Indonesia and Vietnam being the worst affected countries (World Health Organization, 2009).

## **SARS**

Yet while the global medical surveillance apparatus, and the global news media, watched South China in anticipation of a H5N1 'bird flu' pandemic starting there, another, unexpected, epidemic originated in the same region. At the end of 2002, cases of a new 'atypical pneumonia' began to be seen in rural China: the first appearance of the disease that was to become known as Severe Acute Respiratory Syndrome (SARS). SARS first came to the attention of the WHO at the end of February 2003 in Hanoi, Vietnam. Earlier that month, a doctor from Guangdong province in China had travelled to Hong Kong for a wedding and had unwittingly infected other residents at the Metropole Hotel. They carried the disease to Vietnam, and also to Singapore, Germany, Ireland and Canada. By the third week in March, several hundred people were infected, with cases reported in Hong Kong, Singapore, Toronto, New Jersey, California and Bangkok.

SARS is now known to be caused by a corona virus (SARS-CoV) and affected mostly adults, and only rarely children. Between two and seven days after infection, most people developed a high fever lasting three to seven days, with some patients developing other symptoms, including headache and body aches, or more rarely diarrhoea or mild respiratory symptoms. This initial mild period of the illness was followed by a period of breathlessness and chest pain. Most patients subsequently developed pneumonia, and around 15 per cent of those affected required artificial ventilation. There was a relatively high death rate of around five per cent. Transmission in healthcare settings was extremely high, and even in the first Hanoi cluster, infection rates of 50 per cent

were reported amongst healthcare workers who had cared for SARS patients (Zambon & Nicholson, 2003).

The appearance of SARS provoked an immediate response from the global media. One of the most striking aspects of the SARS phenomenon was the speed at which the whole episode unfolded, from first reporting, to a screaming panic, to a rather embarrassed silence – all in just three months. Early reporting described the new threat as a ‘killer’ or ‘deadly’, and speculated as to how the epidemic would play itself out. The predictions were dire: ‘this could be the next plague’, the ‘big one we’ve been waiting for’ and so on (Washer, 2004). An important contextualising story for the SARS epidemic was the announcement, on 20 March 2003, that the second Gulf war had begun. Although there was some speculation at the outset that SARS may have been connected to bioterrorism, this was soon discounted. The epidemic therefore occurred around the same time as the US and British forces were invading Iraq, and the war may even have kept SARS out of the media to a certain extent.

The Western media reporting of SARS focussed on its effect on daily life, particularly in Hong Kong, the putative centre of the epidemic. The stories evoked either zombie or post-apocalypse horror-film imagery: deserted shopping malls, cinemas and restaurants; empty public transport; events where crowds would gather cancelled; and the use of surgical face masks. Initially, the Hong Kong authorities downplayed the danger of the disease, insisting that cases of ‘atypical pneumonia’ were confined to healthcare workers who had contracted the disease from an index patient (Baehr, 2006).

With the epidemic spreading, on 2 April, the WHO issued a travel advisory against non-essential visits to Hong Kong and to the Chinese province of Guangdong. As a result, Hong Kong became an ‘international pariah’ until the WHO removed it from its list of SARS affected areas on 23 June. Tourism plummeted and hotel occupancy in the territory fell by 20 per cent in April and May. Cathay Pacific, Hong Kong’s flagship airline, which usually carried 33,000 passengers a day, was by April reduced to only 4000 passengers. Workers were laid off as over 3,800 businesses folded between March and the beginning of June (Baehr, 2006). Travel to other affected areas in East Asia was also reduced. In May, the decline in the numbers of passengers flying from London, Heathrow to Beijing was down 89 per cent, and to Hong Kong and Shanghai about 63 per cent (although the number of those going to Toronto declined only 20 per cent) (Lewison, 2008).

Apart from East Asian countries, the other place where SARS caused major problems was in Canada, particularly the city of Toronto, where

there were 224 cases and 44 deaths, and nearly 30,000 people were quarantined by the Canadian public health authorities. The panic that accompanied SARS was unlike anything Canadians had ever experienced. Toronto's economy was numbed by fear, coupled with stigma and international travel sanctions (Feldberg, 2006). The origins of SARS in China led to boycotts of Chinese-Canadian businesses and prompted calls for the introduction of more stringent immigration controls (MacDougall, 2006). The outbreak of the disease in Toronto also exposed Canada's public health system, prompting the Canadian government to later review the nation's public health policy and infrastructure.

Later research indicates that SARS did not have the global economic impact that was feared at the time. In fact, the economies of Hong Kong, China and Vietnam all experienced faster overall annual growth patterns in 2003 than 2002. Although it is impossible to disentangle the impact of the fear of SARS from the fear of terrorism on the decline in travel to and from Canada, most of the decline in US international travel in the spring of 2003 reflected a fear of terrorism rather than SARS. Nor did the epidemic have other impacts in either South Asia or Canada – the trade in goods, supply chains and retail sales were all unaffected, as for every negative effect there was a potential offsetting response that mitigated the economic consequences (James & Sargent, 2006).

While the Chinese media talked of a 'war' on SARS, (Chiang & Duann, 2007) in the British press there was a striking lack of conventional military metaphors. This was probably attributable to the war in Iraq, which may have pushed commentators to develop a distinctive discursive system for the two stories (Larson et al., 2005; Wallis & Nerlich, 2005). Arguably, the Chinese media saw SARS as a threat to the Chinese nation in a way that it was not perceived to be elsewhere.

However, the general sense of pessimism emanating from the ongoing so-called 'war on terror' pervaded the Western reporting of SARS. There was a sense of an impending apocalypse, which was greeted with something approaching warmth, as if 'we' deserved it for 'interfering with nature'. The media compared the potential death toll of the SARS epidemic with the Black Death, the 'Spanish' flu of 1918 and the AIDS epidemic. This framing of the story in terms of epidemics with high death tolls, rather than say with the 'mad cow disease' or West Nile virus epidemics, which had much lower mortality, served to increase the sense of risk. Because of the tone of the news coverage, people who were far distant from the risk of SARS became concerned and started taking precautions as if they were in the affected area. Opinion surveys suggest that SARS had a significant psychological impact even in areas

little affected, such as the USA, where there were only 75 cases and no deaths (Blendon et al., 2004).

According to the WHO, SARS was the first 'severe infectious disease to emerge in the globalised society of the twenty-first century' (World Health Organization, 2003c). This conceptualisation of SARS as linked to globalisation connects to Beck's *Risk Society* thesis. One of the characteristics of Beckian risks is that they are unbounded by the geography of the nation state. The concern was that SARS could be easily spread around the world through international air travel by infected passengers either transmitting the virus to those around them on the plane or taking the pathogen with them to another country: the *stepping off a plane scenario*.

In fact, although SARS was spread from one country to another by air travel, there is evidence that in-flight transmission to other passengers was uncommon. For example, German researchers traced 39 passengers who had travelled within four rows of a man who had flown from Hong Kong to Frankfurt on 30 March and who later developed SARS. All the 39 passengers' blood samples tested negative for SARS antibodies (Breugelmans et al., 2004).

If from a Beckian perspective SARS can be cast as a phenomenon of the late modern globalised era, then from Douglas' perspective, the reactions to SARS resonate with epidemics that struck 'primitive' societies, particularly the way that *others* were blamed and scapegoated. International media coverage of SARS (excluding that of China its supporters), consistently blamed SARS on the mainland Chinese people and the Chinese Communist system.

This blame was directed on several fronts. Firstly, the Chinese Communist authorities were blamed for having covered up the scale of the epidemic and for not having 'co-operated' with the 'global health authorities', namely the Western doctors, scientists and epidemiologists of the WHO. The Chinese were stereotyped as corrupt and mendacious in the Western media, and Chinese 'secrecy' was in turn linked to the purported 'personality' of the Chinese system and its 'habit' of avoiding or denying sensitive or negative issues, with the analogy given of China's mismanagement of its HIV epidemic (Buus & Olsson, 2006; Chiang & Duann, 2007; Washer, 2004).

A second strand of blame related to certain (Chinese) individuals. The doctor at the centre of the outbreak at the Hotel Metropole, Dr Liu Jian-lun, was described in the media as *patient zero*. The origins of the term are in the AIDS epidemic, in which, as described in Chapter 3, a Canadian air steward was said to have recklessly transmitted HIV to many of the

early North American cases. The term *patient zero* seems to have entered the lexicon, as it was used in the media accounts of SARS without any further explanation. Dr Jianlun was, with others, also described as a *super-spreader*, and, together with some other individuals, was blamed for carelessly 'spreading' the disease, for example by travelling to Hong Kong after caring for SARS patients in China.

However, the most prominent element of blame was directed against the Chinese people and Chinese culture more generally. The Chinese were said to be fond of exotic foods, to live close to animals, and to have poor hygiene practices. Singled out for criticism were the alleged Chinese habit of spitting in public places and China's unhygienic live animal markets. Even in the more liberal British broadsheets, there was a coherent package of themes relating to dirt and difference, clearly meant to invoke 'our' disgust at the way 'they' live and what 'they' eat. The British reader, assumed to be not of Chinese origin, was thus led to place the responsibility for SARS at the door of the Chinese. The recurring theme of '*others are dirty / eat disgusting food*' again had the effect of reassuring that 'it couldn't happen here' because 'we' don't live like that (Washer, 2004).

In the Western media coverage, reflecting the treatment of Africans in the coverage of AIDS and Ebola, the Chinese themselves were rendered invisible, seldom quoted, and their opinions rarely sought. For example, while the WHO press release reporting the death of Dr Carlo Urbani stated that he was the 'first WHO officer to identify the outbreak of this new disease' (World Health Organization, 2003b), in the newspaper reports he was credited with being 'the first person' to identify the disease. The newspapers actually meant the first *Westerner* rather than the first person. Yet when the newspapers accused the Chinese of a cover-up, they were implicitly acknowledging that Chinese doctors must have identified SARS as a new disease several weeks or months earlier.

A whole set of images and symbols were used repeatedly in the Western reporting of SARS that spoke of Chinese irrationality, backwardness and chaos, and of the threat this posed to the rationality and superiority of the West. China, the Chinese and their culture thus threatened 'global' (read Western) health and institutions. The possibility of containment was provided by another set of images: heroic Western doctors, laboratories and surveillance, with their associated connotations of rationality, modernity and order.

The binary oppositions of Western/Chinese images presented in the media coverage of SARS recall Shohat and Stam's (1994) point about *Eurocentrism*, discussed in the previous chapter. *Our* rational

science was contrasted to *their* superstition; *our* global commerce (banks/airlines/shopping malls/multinational corporations) threatened by *their* chaotic, primitive and dirty markets; *our* surveillance thwarted by *their* secrecy; *our* efficiency (laboratories/doctors/scientists) battling *their* corruption. Poor Chinese peasants and the pathogens that they bred thus threatened to invade and lay ruin to *our* modernity (Washer, 2004).

In comparison to the lurid coverage of SARS in the Western press, the Communist Chinese mainland *The People's Daily* and Taiwanese *The United Daily News* (which supports a softer policy towards mainland China) used comparatively trivialising language, such as 'atypical pneumonia' to downplay the danger of the disease. *The People's Daily* constructed the disease SARS itself as the *other*. In contrast, the Taiwanese *The Liberty Times* (which supports independence for Taiwan) described SARS using the term *sha*, an innovated Taiwanese term triggered by the appearance of the similarly pronounced English acronym 'SARS'. This linked SARS to the commonly held Chinese folk belief that there are fierce gods, devils, ghosts or evil spirits – *shas* – everywhere. The *Liberty Times* depicted mainland China, and the people who travelled and did business there, as a menace, the source of *sha*, a combination of demon and invader attacking Taiwan (Chiang & Duann, 2007).

The blaming of the Chinese for the SARS epidemic builds on a nineteenth-century racist discourse which blamed the Chinese *other* for several disease epidemics. In the eyes of most nineteenth-century American whites, Chinese workers were regarded as little better than black slaves, heathen, primitive and morally degenerate. The Naturalization Act of 1870 limited American citizenship to 'white persons and persons of African descent', making the Chinese ineligible for citizenship, a status not changed until 1943 (Kraut, 1994).

The Chinese were blamed for the successive smallpox epidemics that struck San Francisco in 1868, 1876, 1881 and 1887 (Craddock, 1995; Craddock, 1998), and for the 1900 epidemic of bubonic plague in that city which killed 112 (mostly Chinese) people. During the 1870s and 1880s, there were concerns in the USA about the socioeconomic effects of the Chinese spreading diseases such as smallpox and plague, as well as of the spread of opium smoking and its relationship to prostitution and sexual behaviour (Ahmad, 2000). In 1882, the US Congress passed the Chinese Exclusion Act, which prevented Chinese immigration. Conventional (white) American wisdom of the day was that Asia and its living conditions were conducive to plague, as well as to other illnesses such as cholera, smallpox and yellow fever. While on America's East Coast blame for public health failures was directed towards the Irish, then the

Italians, and later towards Eastern European Jews, on the West Coast, any epidemic of infectious disease from smallpox to syphilis was blamed on the Chinese (Barde, 2003).

This discourse of blame resurfaced and was recontextualised in the case of SARS to fit contemporary political economic concerns, particularly around globalisation and the rise of the economic power of China. Yet how did the Chinese themselves respond to being blamed? NYC's Chinatown was stigmatised during the SARS epidemic, despite having no SARS cases, and people avoided the area and its restaurants. Research carried out with Chinese-American residents there revealed that many distanced themselves personally from risk, and instead identified their parents, children and the elderly as 'at risk'. At the same time they reaffirmed the association of Chinese culture with disease by redirecting blame onto recent Chinese immigrants, particularly those from Fujian Province, who had arrived illegally in the 1990s and represented a huge demographic shift within the NYC Chinese community. However, whether someone was regarded as a 'recent' immigrant was determined not by when they arrived, but by their degree of familiarity with American customs as opposed to their adherence to the customs of their country of origin, for example in respect of hygiene. In a demonstration of how people can be *othered* not just externally, but also within a community, Chinese New Yorkers spoke of the threat posed by recent immigrants, and overlaid this with notions of 'their' dangerous food, rural inferiority and alleged disregard for others (Eichelberger, 2007).

With the benefit of hindsight, SARS proved not to be 'the big one' that was feared at the time, although it is often cited as a 'rehearsal' for the threatened H5N1 influenza pandemic. In a Beckian sense, the risk moves elsewhere, always just over the horizon. In the end, SARS was contained through a combination of global surveillance, quarantine methods and travel bans. Despite talk of SARS being the 'first epidemic disease of the twenty-first century', SARS was contained by methods that would not have been unfamiliar to fourteenth-century Venetians. After 5 July there were no new cases reported, and on 14 July the WHO stopped publishing a daily table of the cumulative number of reported probable cases of SARS. In total, there had been a cumulative number of 8437 confirmed cases of SARS worldwide, of which 813 were fatal (World Health Organization, 2003a).

In sum, after the EID worldview gained wide currency in the middle of the 1990s, infectious diseases moved up the media and political agenda. Epidemics of new infectious diseases, or sometimes even the threat of epidemics, waxed and waned in the public(s) attention, with the pitch

of the risk discourse ramped up with each new threat. The discourse surrounding these diseases is mapped onto *Risk Society* concerns in various ways: concerns about globalisation and the ease of modern travel and migration; about the economic interconnectedness of the globalised world; about the dissolving of the borders of the nation state; about the misuse of technology; and about the role of discredited and mistrusted expert opinion.

At the same time, we can discern at least two blaming patterns in the responses to EID. The first, seen in those diseases that affect 'people like us', such as 'superbugs' or (for the British at least) 'mad cow disease', directs the blame upwards to *our leaders*. The second, more usual blaming pattern distances the threat by *othering*, as seen in diseases that affect geographically distant or marginalised people, such as AIDS, Ebola and SARS. In Mary Douglas's terms, these patterns trace a connection between responses to the infectious diseases of late modernity and to more 'primitive' responses.

In both 'primitive' and modern responses to epidemics of infectious disease, a central and recurring *motif* is the hygiene of *others*, or more precisely their alleged lack of it. Thus, in the next chapter, it is to this delicate matter of personal hygiene, and to notions of dirt, germs and contagion, that we shall direct our attention.