

The ‘moral careers’ of microbes and the rise of the matrons: An analysis of UK national press coverage of methicillin-resistant *Staphylococcus aureus* (MRSA) 1995–2006

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This paper examines similarities and differences in media discourses relating to methicillin resistant *Staphylococcus aureus* (MRSA) at three important points in the development of the bacterium and its perception by the public over the last decade. We analyse three increasingly large sets of texts from the national media using a variety of complementary qualitative and quantitative methods. As such this paper exploits, develops and empirically assesses an emerging methodological trend in applied linguistics, namely the convergence of critical metaphor analysis, with corpus linguistics and science and technology studies. Using this, the study identifies a shifting media narrative that involves changes in *dramatis personae* over the decade. First, personified forces of nature, doctors and hospitals are engaged in a battle of evil against good, but also intelligence over stupidity. Second, we are presented with victims of personified bacterial forces and doctors and hospitals cast as perpetrators of crimes of omission by not cleaning hands or wards. Third, the malignant forces of politics try to exploit the evil forces of nature for their own ends while a mediator between the doctors and the potential victims of MRSA emerges and is given political and symbolic power: the modern matron.

Keywords: Risk; risk communication; risk perception; media; public health; MRSA

Introduction and background

In the early 21st century, healthcare-associated infection (HCAI) was estimated to afflict around 100,000 people each year in England, kill about 5000, and cost the UK's National Health Service £1 billion (National Audit Office 2000, 2004). At the time of writing, a rising trend in mortality attributable to these infections is being sustained, despite efforts on the part of policymakers and practitioners (Office of National Statistics 2007). Such statistics and negative media reporting on poor hospital hygiene (Gould 2005) has led to a drive for hospital cleanliness and ambitions to achieve a reduction in health care associated infection (National Audit Office 2000, NHS Estates 2000, Department of Health 2002a, 2003b, 2004b,c,d, National Patient Safety Agency 2008), not least because of its socio-economic burden (Plowman *et al.* 1999, 2001). Furthermore,

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healthcare-associated infections and hospital cleanliness are ‘perceived as serious problems by the British public and health workers’ (Gould 2005).

The rise in hospital acquired infections such as methicillin resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE) and *Clostridium difficile* (*C. diff*), have undermined complacency about ‘the seemingly magical powers of antibiotics’ (Koteyko and Nerlich 2008) and launched a drive for cleanliness to control spread of infection. For example, the Department of Health (2002a) emphasizes the role of handwashing and ‘respiratory hygiene’ (covering the mouth and nose when coughing or sneezing) to reduce the risk of infection. In 2004, there was a major national advertising campaign to ‘clean your hands’ (<http://www.npsa.nhs.uk/cleanyourhands>) and a whole range of other policies and initiatives to deal with spread of infection. This has been developed in tandem with the roles of modern matrons, who are an idealized bug-buster, championing hygiene and ‘leading and driving a culture of cleanliness in clinical areas’ (Department of Health 2004a: 18). Their role is reminiscent of Florence Nightingale’s statement: ‘Very few people, be they of what class they may, have any idea of the exquisite cleanliness required in the sick room’ (Nightingale 1860: 92). Nightingale’s comment foregrounds an essential ambiguity over disease control. Her tendency to privilege issues of cleanliness and public hygiene over germ theories (Small 1998) highlights the profoundly moral and political dimensions to discourses over diseases and pathogens, which are still with us today.

This in turn meshes with Mary Douglas’s (1966: 31) concern with dirt as ‘matter out of place,’ which suggests that in order for dirt to be defined, a moralized framework as to where particular kinds of matter belong is presupposed. It can therefore be proposed that the pathogenic agents, and those whose job it is to combat them, have a kind of ‘moral career’ in the manner identified by Becker (1963) or Goffman (1961). This construct aids in our understanding of the adoption of pathogenic and professional identities in the drama. In Goffman’s original formulation of the term, an important component of the moral career ‘concerns official positions, jural relations, and style of life, and is part of a publicly accessible institutional complex’ (1959: 123). The idea that moral identities of medical phenomena relate to how tractable they are in the face of medical and nursing intervention has been proposed by May and Kelly (1982). In his famous studies of bacteriology in the 19th century, Bruno Latour (1988) proposed the novel manoeuvre of treating the microbes themselves as actors in the drama of discovery and in the social transit of ideas. As we shall see, the important ways in which popular discourse treats MRSA anthropomorphically are especially well captured by this notion.

Many authors have focused upon mass media representations as a key site where the representational, metaphorical and communicative work related to scientific phenomena and risk takes place. Wallis and Nerlich (2005) have examined the metaphoric framing of SARS as a ‘killer’ and Washer and Joffe (2006) describe how social representations of MRSA in newspapers link it to issues of the management of hospitals and the erosion of authority and morality previously ascribed to matrons. In addition, a substantial literature exists concerned with the cultural formulation and communication of risk in social life (Barnett and Breakwell 2003, Kasperson and Kasperson 2005, Masuda and Garvin 2006).

Whilst much of this work has sampled the mass media over time, researchers have just begun to document the changing moral career of MRSA over time. Such an exploration is valuable, for as Haraway (1992) has shown in the case of immunity and HIV, the struggle to understand its mechanisms of action prompted profound changes in the metaphors through which it was understood. In introducing metaphor to the study of risk, we are seeking to draw attention to the work which is done in communicative activity to

understand one conceptual domain in terms of another. In Lakoff and Johnson's (1980) classic formulation, metaphors consist of a source domain from which ideas are drawn and a target domain which is illuminated by these mappings. In Richards's (1936) work, metaphors are decomposed into the vehicle (the source) and the tenor (the target). Further, the conceptual mappings in metaphors may involve *ground* and *tension*, where the *ground* involves aspects which are similar and the *tension* involves aspects which are novel or apparently dissimilar.

It has become clear in recent years that infectious diseases are not only a matter of epidemiology, virology and microbiology, but that the politics and biology of infectious diseases, in our case health care acquired infections such as MRSA, interact. This in turn intersects with culture, which provides the resources with which stories are told and understood. The discursive context interacts in various ways with representations of the agent of infection, as people talk, deliberate and act out their lives. Examining media discourses of MRSA contributes to the study of infectious diseases and society, which complements the emergent field of critical metaphor analysis. It also allows exploration of the interanimation between discourse and healthcare institutions, actors and identities, such as the modern matron.

The role of nursing in relation to the management of risk has itself changed in recent years, as the healthcare disciplines have moved to a framework of decision making that is driven by protocols, guidelines and bureaucratic procedures (Ruston 2006) rather than individual judgement. Nursing has been increasingly preoccupied with making proceduralized risk assessments based on algorithms that incorporate research evidence in order to specify clinical action. Consequently, the structure of responsibilities has shifted, yet the impact of this upon public discourse is as yet unclear.

The present study uses a decade-long capture of the UK's press coverage of MRSA to document changes in forms of representation over time with a view to examining the moral career of the infection. In this paper therefore we will examine systematic similarities and differences in UK press discourses relating to MRSA, at three important junctures in the development of the bacterium and its presentation to the public over a 10-year period.

Design and methodology

We set out to analyse three successively larger bodies or 'corpora' of texts from the UK national press, from 1995, 2000 and 2005, using a combination of complementary qualitative and quantitative methods. We will investigate how the risks associated with MRSA were framed metaphorically, and what measures were formulated and advocated to deal with these risks, not least the rise of the modern matron as a moral actor in the drama. This paper exploits and develops an emerging methodological trend in applied linguistics, namely the convergence of critical metaphor analysis (Charteris-Black 2004, Larson *et al.* 2004, Wallis and Nerlich 2005) with corpus linguistics, where large bodies or corpora of text are subject to electronic analysis (Sinclair 1991, 2004, Stubbs 1996, 2001). Corpus linguistics is a relatively new application in relation to health care communication. However, recent explorations with this method such as Adolphs *et al.* (2004), Brown *et al.* (2006) and Harvey *et al.* (2007) have established its potential to generate insights about large bodies of data. Previously, accounts of communication in health care have relied heavily on observational, qualitative methods (Skelton and Hobbs 1999), often working with small data sets. Due to its inclusion of relatively large samples, corpus linguistics attempts to represent the wider field of language used in that particular domain (Stubbs 1996).

Therefore, we sought to capture the entire output of the UK national press in the years 1995, 2000 and 2005 to sample the story at three key points. In 1995 the issues were being formulated, in 2000 the ‘battle’ or ‘race’ was under way, and in 2005 the major UK political parties were electioneering. This strategy should suffice to position MRSA at three key stages in its moral career. Press coverage in the UK was sampled via the Lexis Nexis Professional database which provides full text access to all British newspapers, using search terms such as ‘MRSA,’ ‘methicillin resistant *Staphylococcus aureus*,’ ‘HCAI,’ ‘health care associated infection’ and ‘health care acquired infection’ to yield a pool of articles for each year. These were then electronically searched for collocates, or words commonly found in combination with the key terms, as well as visually searched by two of the researchers independently to code for metaphors where one domain was being explained in terms of another, as per the definition from Lakoff and Johnson (1980).

Using large data sets pertaining to whole years allows the analyst to account for a wide range of variation which might be present in the texts and therefore ground generalizations on more substantial and representative textual evidence. Thus, with large bodies of data, such as those associated with press coverage of MRSA, corpus linguistics is particularly well equipped to capture recurrent phrases in discourse and therefore can offer tools for making generalizations about meaning whilst retaining sensitivity to individual instances. Corpus linguistics can therefore provide grounding for qualitative analyses, complementing critical discourse analysis and metaphor analysis with a quantitative dimension which enables us to see the generality of the highly particular insights gained from qualitative analysis.

The metaphor analysis employed here is derived from work on metaphor in social studies of science and the sociology of expectations, especially relating to infectious diseases in humans and animals (Larson *et al.* 2004, Nerlich 2004, Wallis and Nerlich 2005, Nerlich and Halliday 2007) where ‘disease management’ discourses were evident relating to foot and mouth disease and avian flu. The concept of ‘metaphor scenario,’ introduced by Andreas Musolff (2006), will be used to plot the moral career of MRSA by analysing press discourses about MRSA in the UK at three distinctive points in time. This will include a time when MRSA was beginning to be formulated as a health risk, a time when it became increasingly viewed as a risk to patients in hospitals, and a time when the fear of MRSA came to outweigh fears about hospital treatment itself. Moreover, the focus upon metaphor in previous accounts of threats to health (Wallis and Nerlich 2005, Washer and Joffe 2006) confirms the value of increasing the qualitative depth of such an analysis by combining it with metaphor analysis.

Results and discussion

First, the overall frequency of appearance of MRSA over the time period in question was plotted, as shown in Figure 1.

The issue of cleanliness and hygiene became a prominent media issue towards the end of the last century, about half a decade after the threat of MRSA had emerged. As one can see from Figure 1, MRSA was not yet a major issue for the national press in the UK in the early 1990s. Coverage remained low even in 1995 after the government had issued a first set of guidelines and when two popular science books were published that painted a picture of MRSA against the apocalyptic background of plagues and ‘superbugs’ (Cannon 1995, Garrett 1995). The term superbug was first used in the mid-1980s, ‘usually in the context of stories about pesticides and the agricultural use of antibiotics,’ until in about 1997 when superbug became a quasi-synonym for MRSA in the media (Washer and Joffe 2006: 2145).

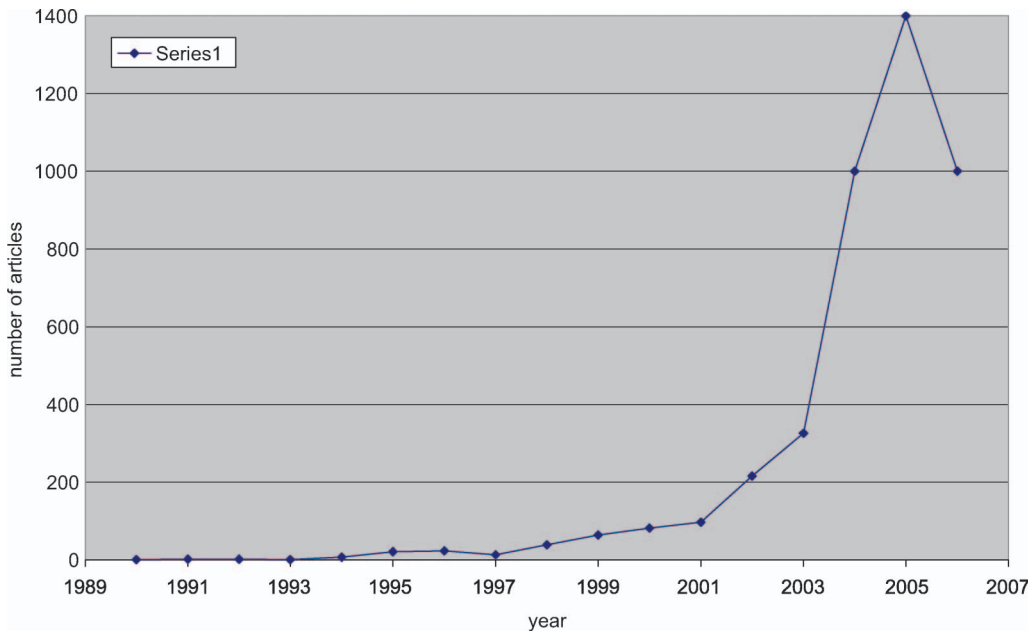


Figure 1. Graph representing the reporting on MRSA in UK national press between 1995 and 2006.

Much work has been done on ‘risk amplification theory’ where particular aspects of a risk may be amplified or attenuated (Pidgeon *et al.* 2003), yet there is still a great deal to be done to explore how specific aspects of risk communication intersect with culture (Masuda and Garvin 2006). In thinking about risks in terms of metaphors and moral careers, it becomes possible to explore how some aspects are formulated prominently in popular discourse whilst others are less conspicuous. In the distinctive moral career undertaken by the microbe, this first phase sees the unknown new risk framed metaphorically in terms of personifying various good and evil forces. Later on, real people, patient-victims telling their own stories about fighting the infection, replace this type of storytelling. In a final stage, the conflict enters a much more political arena. Gradually, the issue of cleanliness emerges until it becomes inextricably linked to MRSA and, indeed, modern matrons in many popular accounts. From the late 1990s, media coverage steadily increased until a substantial rise around 2004 when the UK’s Labour government announced various schemes to tackle the increase in MRSA, and 2005 when MRSA and cleanliness became party political issues.

1995: Personification, war and bacterial cleansing

It is commonly assumed that scientific and medical discourses constitute a sober, unembellished, representation of fact, whereas media discourses are a rather more florid representation of facts *as* something else, either fiction or anecdote (Rheinberger 1997: 103). As Aldridge and Dingwall have pointed out: ‘There is [...] a complex symbiosis between science and spectacle’ (2003: 438). Science and medicine commonly explore disease *as* an invasion, the immune system *as* a defence system against foreign invaders, bacteria *as* ‘good’ or ‘bad,’ and dealing with infection as a ‘war against microbes,’ and so

on. However, as we shall see, this seemingly commonsensical distinction is not upheld up in the present data.

Let us now turn to the ‘representation’ (with or without ‘embellishment’) of MRSA in the 1995 media coverage. It should be stressed that out of a total corpus of 21 articles, only one article mentions the issue of cleanliness in 1995. This is not yet a topic for debate. The rest of the articles (apart from a subset dealing with hospital league-tables) tell remarkably vivid stories of heroes, villains and battle. These narratives about a new ‘superbug,’ based for the most part on two books written by popular science writers, can be read as a creation myth whereby something unknown and threatening is given mythical agency and it is here that theories concerning the social amplification of risk can be usefully extended by attention to the metaphors through which risks are made intelligible, formulated and communicated within particular cultures.

There are three main protagonists in this mythical story of battle and struggle: doctors who are portrayed either as heroes or villains, but who mostly come across as relatively stupid compared to the clever bacteria and antibiotics, the two other protagonists in this metaphor scenario. Bacteria are mostly portrayed as very clever creatures that outwit doctors and display a kind of ‘intelligent design’ based on exploiting evolution in cunning ways. Antibiotics can be a cure or a curse, but are mostly portrayed as unthinking, just like the doctors who prescribe them; they are not quite as clever as the bacteria. This story or creation myth strongly contradicts the normal story of human victory over nature. Replication and evolution are personified and represented as intelligent action on the part of bacteria which triumph over the human and medical mind. The primitive and primordial outwit the modern mind and modern medicine.

A closer look at the metaphors used by journalists and the narratives spun around them and the kind of actions that they might invite reveals that some of the dominant metaphor scenarios and associated metonymies are war, fight and battle. On the one side of the representational stage are doctors engaging in overkill (overprescribing antibiotics) but losing the war against bacterial disease. On the opposite side are killer bugs fighting for survival and winning the war, using evolution as a clever tactic to outwit the doctors; they invade, colonize and spread. James Le Fanu in the *Times* (18/5/95) p. 19 summed up the situation thus:

antibiotics are going through something of a crisis of confidence. Doctors, it is alleged, have killed off the proverbial goose that has been laying the golden eggs dishing out antibiotics like Smarties for the most trivial of illnesses. So now the human species is confronted by a new and fearful prospect—bacteria resistant to not just one but a whole range of antibiotics.

Or, as the *Daily Mail* put it on May 9, p. 42:

Doctors thought they had won the war against bacterial disease. But their major weapon may turn out to betray the human race by making our enemies more powerful. Antibiotics have upset the balance of nature and turned harmless bacteria into killers.

As it is depicted in the press coverage excerpted here, there are no clear forces of good. The doctors are criticized because they overuse antibiotics; antibiotics are enemies because they make bacteria more problematic; and bacteria are enemies because they cause disease. In this the bacteria are most clever agents of destruction using mutation, variation and evolution as a weapon in the war and unlike doctors, it seems, they learn from experience. They are depicted as intelligent and intentional agents: ‘they relentlessly eat, divide and multiply, secreting defensive poisons to thwart their attackers, hiding when necessary, and, if all else fails, mutating’; ‘they rapidly mutate to withstand chemical attacks’; ‘they take

advantage of weakness in the defence'; they are driven by the maxim 'survive and reproduce'; 'they have acquired the ability to make an enzyme, penicillinase'; 'staggering ability of bacteria'; 'they outwit host immune system'; 'they share new strength with other microbes.' These descriptions use 'implicit models of evolution' to describe the action of bacteria seen as intelligent agents and designers (see Aldridge and Dingwall 2003).

The only control measure used against these invading hordes and discussed at any length in 1995 are 'killer tiles' that strike back at bacteria. Although no precisely formulated plan for action was described, readers are presented with the view that our response must involve 'fighting back.' This is a common trope in scientific discourse about the rise in antimicrobial resistance; they are described as more than clever or just evolving uncontrollably. Indeed, they are using evolution as a tool in intelligently designing new deadly onslaughts on humanity. Nature is fighting back using evolution to overpower humankind. So, what weapons can be used against such brave new bacteria? Obviously, over-prescribing antibiotics, those ambivalent medical agents, has to be stopped. Less obviously, we have to somehow 'outwit' our bacterial opponents or, if that is not easily achieved in the face of their super-evolutionary intelligence, we have to give them less occasion to exert their power, by destroying their ecological niches. The issue of cleanliness was only alluded to once in this earlier corpus but it became central in media reporting 5 years later. The 1995 reporting has set the 'scene' and introduced the main characters: let the battle commence.

2000: Victim narratives, numbers and the call for matron

The corpus for the year 2000 contained 82 articles in total, of which 26 articles were written in the broadsheets and 56 in the tabloids, who made MRSA one of their central topics of choice. On some days, the *Daily Mail* and the *Daily Express* in particular published whole clusters of articles on MRSA which explored the issue from various scientific and human interest angles. In 2000, the anthropomorphic theme of bacteria outwitting humans continues:

Doctors appear to be fighting a losing battle as the bug laughs off all attempts to control it with antibiotics (Daily Mirror, p. 6, 17/11/2000).

The bugs were fighting back. Some developed little pumps that squirted out the antibiotics faster than they could get in. Others developed chemicals that chopped up penicillin, and grew thick cell walls that made it impossible for the antibiotics to penetrate them ... Bacteria are always one step ahead (Daily Mirror, p. 22, 22/5/2000).

However there were some marked changes in the way MRSA was reported. Whereas in 1995 the unknown was personified in the context of the emergence of a new and as yet speculative risk to human health, in 2000 the moral career of the microbe is extended such that the risk becomes an actual personal and institutional risk, and one could say, in line with Pidgeon *et al.* (2003) or Kasperson and Kasperson (2005) that this has been amplified. Indeed, this amplification was enhanced between 1995 and 2000 through the publication of several reports, media coverage of which had raised public awareness of the issue (DoH 1996, NAO 2000). The personification of battle-savvy bacteria is complemented by personal narratives of battle against infection. The scenery changes too. From a mythological evocation of bacteria on the march we now turn to real places and spaces, from hospital corridors to spaces under patients' beds, where bacteria lurk. The tabloids in particular focus on personal interest stories: we found 15 personal stories about people dealing with or dying from MRSA infections in the tabloids and only two in

the broadsheets. As the *Daily Mail* (23/11/2000) p. 6, reported of one man who had succumbed to infection:

His widow Joan, of Maida Vale, North-West London, said: 'Within hours of coming home, the wound reopened and was leaking blood. He went back to hospital where he spent seven weeks of sheer hell.' [Joan] said hospital hygiene was poor and full urine bottles were left under her husband's bed.

The main actors involved in the moral career of MRSA change too. Not only is there now a one-to-one battle between patients and bacteria; institutions too become major players. Between 1995 and 2000 there was a marked rise in healthcare-associated infections and a political response was needed. In January 2000, the Public Health Laboratory Service Board published a report saying that one in every 10 patients in acute-care hospitals is infected after admission and up to 30 per cent of hospital-acquired infections could be prevented through effective infection control programmes, like hand-washing (see NAO 2000). In February, the National Audit Office (NAO) published figures that reverberated in the press coverage throughout the year 2000 and are still quoted today, namely that about 5000 people a year die of healthcare-associated infections and that handwashing is one of the most important measures in the control of MRSA. In November, the Patients' Association published a report on *Infection Control and Medical Device Decontamination—A survey of Strategic Health Authorities*. In the same month the Health Services Professional Advisory Committee discussed again the numbers provided by the National Audit Office and stressed yet again the importance of handwashing. In this way the National Audit Office report, its numbers and its focus on cleanliness, framed the whole of the MRSA reporting of the year 2000. A search through the corpus for the year 2000 shows that the figure '5000,' relating to deaths from healthcare-associated infections according to the National Audit Office, was quoted 40 times. Most frequently it was linked with terms such as *year* (26 occasions) and *kill* (21), followed by *patients* (10) and *deaths* (6). One can say that the personal interest stories which increase in 2000 provide the human face of the bare statistics that were provided by the National Audit Office and that were discussed by policy makers, who also referred to personal anecdotes to illustrate their points.

As Renn (2003) and Masuda and Garvin (2006) note, the interpretation of risks takes place with conceptual and metaphorical tools that are already familiar. Thus, there was also continuity between 1995 and 2000. Bacteria are still discussed as agents, especially when scientists or scientifically trained people speak out or are quoted (e.g. Tim Lang, Miriam Stoppard, Dr Masterton). The metaphor scenario of war and battle and the personifications of bacteria and antibiotics start to interact more. The war and contest scenario shifted slightly towards another scenario, that of crime. Doctors in particular are metaphorically 'criminalized':

Doctors are among the biggest culprits for spreading bugs simply because they are not washing their hands between treating patients, according to a new report. It claims that more than 100,000 hospital patients are infected every year and that bugs could be killing one in 20 of those who get them (*Daily Express*, 7/1/2000) p. 7.

Doctors were shamed as the worst offenders for helping to spread bugs (*Daily Mail*, 17/2/2000) p. 10.

End grime wave in NHS (*Daily Mirror*, 22/2/2000) p. 31.

Equally, bacteria are 'criminalized': they 'stalk,' they 'lurk,' they are 'at large,' and so on. Another scenario closely linked to struggle and contest is also activated, namely the

race scenario, a race in which the bacteria always seem to be winning over doctors and hospitals: 'bacteria are always one step ahead'; 'bug would change form and stay one step ahead of science'; 'medical science is struggling to catch up.' A somewhat more creative quasi-military metaphor is used by two scientists, Rosamund Williams from the World Health Organization and Dr Chris Butler, senior lecturer in general practice at the University of Wales College of Medicine, an expert in community infection, who both say that MRSA is a 'timebomb':

the WHO's Dr Rosamund Williams said the infection had the potential to explode. 'There is a lot of disturbing data from many countries suggesting that we are sitting on a timebomb,' she said (*Daily Mail*, 13/6/2000) p. 20.

Thus implying that urgent action was needed to fight against its spread, especially as it was reported to be gaining resistance to vancomycin, one of the few drugs known to still be effective. This more abstract concept supports the mobilization of patient and victim voices by the media, as well as calls for enhanced hygiene practices, greater openness about the issue and improved monitoring, which were exhorted with increasing urgency in the management of MRSA.

Unlike in 1995, various ways of controlling or dealing with MRSA are discussed, from alternative medicines to test-tube antibodies. But the message that cleanliness might be key to eradicating MRSA (by eradicating its ecological niches) becomes central. Hygiene is mentioned 65 times and collocates with *hospitals* (17), *poor* (8), *improve* (5), *infections* (5), *standards* (5), *lack* (3), *proper* (3), *washing* (3). The following words are not frequent collocates but one can say that cumulatively they illustrate the semantic preference for lexical items referring to 'low standards': *shoddy*, *sloppy*, *appalling* and *compromised*. Clean occurs 46 times and collocates with *hospital* (8), *ward* (7), *infection* (6), *nurses* (6), *compliance* (5), *standards* (5), *properly* (4). Hospitals become the main scene and the main focus of reporting. Whereas 1995 was mainly about doctors, hospitals and bacteria engaged in a mutual but rather abstract struggle, 2000 is about hospitals, patients and cleanliness. One key actor in the ensuing drama of cleanliness begins to make her appearance in 2000: the matron. Thus, the focus shifts gradually from doctors and patients to what one might call a guardian of cleanliness and propriety: the matron, an issue that becomes more prominent in 2005. Between 2000 and 2005, two things happened to give the matron issue more prominence. In 2001, modern matrons were introduced and, in 2004, a Matron's Charter was published.

Modern matrons were recruited, with 'specific responsibilities for ensuring wards are clean and preventing HAIs [health care acquired infections], although there is no evidence as yet for a direct link between ward cleanliness and the spread of HAIs. They have the authority to withhold payments to contracted cleaning companies' (King's Fund 2005). Their posts were created (Department of Health 2000, 2001, 2002b, 2003a, 2004a) in response to public demand for 'an authoritative figure who would not only provide clinical leadership, but who would also be easily identifiable, have close contact with patients and ensure delivery of care to the highest standards,' ensuring regular monitoring of ward cleanliness and prevention of healthcare-associated infection (McDonald 2004).

There are, of course, competing perspectives on the role of the modern matron, but it is here that culture and risk formulation can be most clearly seen, in the image of the matron whose significance has been documented elsewhere (Bridges 1990, Berry 2004). This figure panders to idealized public perceptions of a 'golden age' of health services when matrons

were seen as providing visible leadership and ensuring high standards of cleanliness (Watson and Thompson 2003); a return to 'the good old days' (Barrett 2003); harking back to when 'wards were spotless, uniforms were starched and you knew who was in charge' (Snell 2001). The modern matron has been seen as a 'quality initiative' (Savage and Scott 2004) responding to patient interpretation of quality as 'clean and tidy environments' (Savage and Scott 2004), 'limiting harm' to patients (Keeley *et al.* 2005), and leading and supporting clinical teams and infection control nurses in prevention of HCAs (Department of Health 2001, 2002b) with 'a focus on giving nurses the authority to improve healthcare environments, improve cleanliness and develop infection control practice' (Hill and Hadfield 2005), restoring some nursing control of environments that had been lost as services were increasingly provided by outside contractors (Barrett 2003). As such, the modern matron is cast as dealing with a 'complex interplay of factors' surrounding healthcare-associated infection (Gould 2005).

Conversely, such individuals were also vulnerable to being cast as scapegoats for failing environments and services. Furthermore, some say they lack sufficient authority to make changes (Hewison 2001, Barrett 2003), and are overstretched in terms of workload and responsibilities with inadequate support structures, resources or mechanisms (Barrett 2003, Watson and Thompson 2003). They are said to fall into a 'hybrid manager' role split between clinical and corporate agendas, 'subject to competing understandings of quality' and struggling to meet key responsibilities identified by the Department of Health (2003a), not least regular and direct contact with patients (Savage and Scott 2004). As we shall see, in the following section, the matron, or rather 'modern matron' takes centre stage in the final act of the moral drama.

2005: Carry on [modern] matron, politics and policies

In 2005 finally two other figures enter the scene: politicians who try to 'wipe out' MRSA and wipe out their opponents by promising to clean up the 'superbug'; and matrons, the new guardians of purity in the war against infection. Two prototypes in particular are invoked: Florence Nightingale, the pioneering nurse (http://en.wikipedia.org/wiki/Florence_Nightingale), and Hattie Jacques, famous as the no-nonsense Matron in five of the "*Carry On*" films (http://en.wikipedia.org/wiki/Hattie_Jacques). Doctors are almost absent from the debate, but nurses and patients assume more centre stage roles. Let us now look more closely at this development.

As Figure 2 shows, the national press output for 2005 on the issue of MRSA was enormous. To make the corpus manageable for a qualitative analysis, we focused on the highest output for one month, April (387 articles), and focused yet again on the output of one tabloid and one broadsheet that had consistently published most articles on MRSA, namely the *Daily Mail* (31 articles) and *The Times* (28 articles).

In 2005, MRSA became a highly politicized topic, as well as a highly popularized one. In Autumn 2004, the then Health Minister John Reid had set as a government target that bloodborne MRSA infection rates be halved by 2008. This, together with the publication of 'A matron's charter: An action plan for cleaner hospitals,' a 'Clean your hands campaign' and a policy document entitled 'Towards cleaner hospitals' had put MRSA on the political agenda. In 2005, this backfired to some extent as the opposition made MRSA a political problem. Whereas in 2000 the keyword 'MRSA' collocated almost exclusively with words that belong to the semantic field of 'medicine' such as *hospitals*, *spread*, *infection*, *staphylococcus*, *superbug*, *contract*, *body*, *bugs*, *drug*, *health*, *laboratory*, *nurses* and *isolate*, the 2005 corpus reveals a different trend: here one of the frequent collocates of

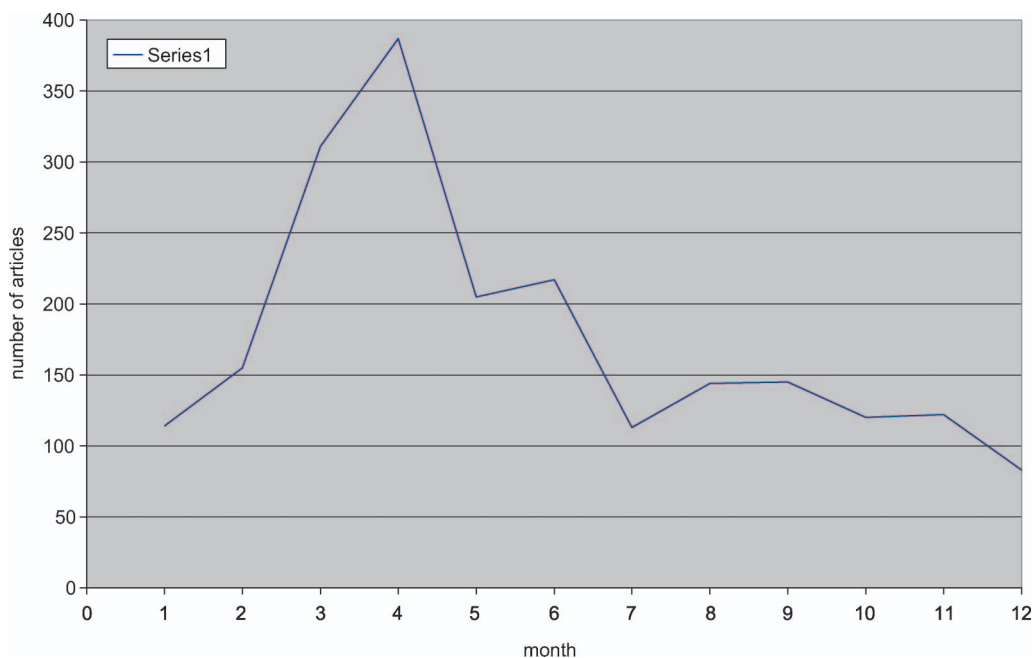


Figure 2. Monthly statistics for MRSA as a keyword in UK national newspapers in 2005.

'MRSA' is *Tory* (38), followed by *Labour* (26), *Howard* (23), *government* (20), *Blair* (18), *election* (14) and *Conservative* (13). The 'war on MRSA' became a weapon in a political war and cleanliness became a focus.

May 5, 2005, was the day of the general election. Leading up to this date, April 2005 was the month during which political campaigning became most intense. Within April, various dates attracted the most coverage: April 7 when Michael Howard the then leader of the Conservatives made a statement in the House of Commons which was widely reported, especially this rhetorical flourish as Mr. Howard chanted: 'Taxes are up, crime up, immigration up, waiting times up, MRSA up, take home pay down, pensions down, productivity growth down, manufacturing employment down.'

Unlike in 2000, when various governmental institutions published reports which were then discussed in the newspapers and supplemented by personal stories, in 2005 two non-governmental meetings dealing with the issue of MRSA in the middle of the election campaign, were widely reported, thereby giving the issue of healthcare-associated infections and cleanliness more prominence. On April 27, both the *Times* and the *Daily Mail* reported on a meeting of the Royal College of Nursing where nurses demanded better and cleaner uniforms. This was reported in the *Times* under the title 'Nurses demand a clean uniform on every shift to beat superbugs' and by the *Daily Mail* as '20 years to wipe out the superbug.' The scenario of battle against the microbe is now linked to that of cleaning and purity in various ways, especially via the expression 'wiping out' which has military as well as cleaning associations (Royal College of Nursing 2005). Cleanliness becomes a possible, plausible and above all 'commonsensical' weapon to 'beat' the superbug.

Despite the uncertainties surrounding the issue, in 2005, MRSA is represented as something more controllable and which politicians pledge to bring down. MRSA can be

controlled is the claim, but it is not done in the form of blame. In this fight for control, the matron is engaged by the major political parties. As one headline in the *Times* proclaims: 'Both parties try to woo matron in the war over superbugs.' On April 12, the Conservatives published their Manifesto which proclaimed that matrons would be allowed to close wards infected with MRSA. They also used a poster saying: 'PUT MATRON IN CHARGE AND WE'D HAVE CLEANER HOSPITALS.'

Both the *Times* and the *Daily Mail* evoke prototypes of the matron when reporting on this issue: Florence Nightingale and Hattie Jacques. Both papers use this latter reference in polemical articles (one by Mick Hulme in the *Times* on April 22, one by Quentin Letts for the *Daily Mail* on April 8).

In an article for the *Times* entitled 'How to conquer MRSA,' Dr Thomas Stuttaford stresses that '[t]o keep infection rates low, beds must be given time to air,' something that, he notes, Florence Nightingale had already done as a matter of course. He also points out that: 'Keeping a modern hospital clean is not as difficult as it would have been in Scutari.' So he poses the question: 'Why then are hospitals so filthy, and why is MRSA such a problem?' And suggests the following answer, which again stresses uncertainty, something newspapers are so often accused of not highlighting: 'The mistake is to think that MRSA is entirely the result of either the irresponsible prescription of antibiotics or the failure of doctors and nurses to wash their hands. They are important factors, some would claim the most important, but they represent only part of the aetiology of MRSA, much of which authorities would prefer to leave unrecognized.' On April 8, the *Daily Mail's* Quentin Letts published an article entitled: 'Not Hattie Jacques, but the ladies are no pushover' in which he describes Michael Howard's visit to a hospital:

We were allowed to see him meet a group of eight jolly matrons and engage in banter about their new uniforms, which they did not like. What is the collective noun for matrons? A swab? None of these admirable women was quite from the Hattie Jacques mould, but nor did any of them look like a pushover. (*Daily Mail* 8/4/2005), p. 21.

Another article also published on April 8 in the *Daily Mail* is less polemical than Quentin Letts' and is entitled 'Howard's super-matrons,' echoing the super-bugs they are supposed to fight. It reports on Michael Howard's personal pledge to 'wipe out MRSA,' personal because his mother-in-law had died of an MRSA infection. It also quotes Howard as referring to Florence Nightingale's dictum 'Do no harm' and as saying: 'Under Mr Blair, our hospitals are failing in that basic duty. I have asked Mr Blair to stop managers overruling doctors and nurses who want to shut wards because of MRSA. But he has refused to do so.'

The importance of cultural history in the formulation of risk is illustrated by the evocation of a whole Florence Nightingale 'scenario' by the newspapers to highlight the role of matrons in bringing MRSA under control. This included Nightingale's role in keeping wards clean and beds aired in Scutari, her motto of 'do no harm' and so on, associating these historical and reverential images with modern matrons (who were introduced to the National Health Service in 2001 following the year 2000 National Audit Office report on healthcare-associated infections). The fictional image of Hattie Jacques is evoked with less reverence, but also stresses the 'power' of the matron, be it over dirt or over doctors. One projects an image of sternness, the other an image of 'jollity.' Both evoke an image of simpler times, of when the 'matron knew best,' a metaphor for the shift in modern medicine from paternalism and deference to consumer culture and choices.

Conclusion

We have attempted to demonstrate here the value of attending to metaphors in the stories of risk presented in the public sphere where MRSA is concerned. Rather than merely attenuating or amplifying risk, it is clear that a great deal of work is done in formulating it precisely, through choices of language, metaphor and historically familiar narratives such as those of the matron, Florence Nightingale or the idea of the microbe as a kind of intelligence. Moreover these formulations of MRSA themselves in the UK national press between 1995 and 2005 can be seen as a drama or narrative in three acts, as the MRSA microbes undertake their moral career and different aspects of the problem rise and fall in a manner reminiscent of Downs's (1972) 'issue attention cycle.' The drama draws on various genres, stereotypical plot lines, characters and other historical or fictional narratives. The representations can be seen as being played out in the form of metaphor scenarios. In the first act, the *dramatis personae* are personified forces of nature as well as earthly creatures fighting them, namely doctors and hospitals engaged in a battle of evil against good. The microbes are also endowed with an anthropomorphic degree of 'intelligence.' In the second act, the victims of the personified bacterial forces are introduced and the doctors, hospitals and the microbes themselves emerge as perpetrators of crimes, as criminological metaphors predominate. These may be crimes of omission (cleaning hands or wards) or part of the very discursive fabric of the infection itself, which 'stalks,' 'lurks' or is 'at large' in hospitals. In the third act the nurses (who were on the sidelines in the first two acts) are empowered to mediate between the ambivalent heroes (the doctors) and the tragic victims of MRSA. In response to the superbug, we have the matron, a super-nurse who emerges equipped with political, symbolic and moral power, and as the story evolves so too does the slippage from questions of infection and contagion to ones of cleanliness.

There are continuities as well as changes over time. Throughout the three acts, the various *dramatis personae* engage in war, battle and struggle, but also in a kind of race. The overall metaphorical scenario then is one of contest. The moral career that the microbe goes through and which this three-part drama draws on are the creation myth, the struggle between heroes and villains, between contamination and purity and later on the factual narrative of Florence Nightingale and the fictional one of Hattie Jacques. Both evoke images of empowerment, cleanliness and strength which are formulated as necessary to finally defeat the evil and unclean forces of nature.

Metaphors, especially when linked to metaphor scenarios and narratives, allow us to understand complex phenomena in terms of everyday experiences. For this reason, they allow scientists and non-scientists alike to conceptualize problems in simpler terms (their heuristic or constitutive function), and they provide a means of explaining complex concepts (their communicative or rhetorical function). Since they are rooted in our shared experiences and they act as 'messengers' between different discourses (Maasen and Weingart 2001, Larson *et al.* 2004, Larson 2005), metaphors create complex links between science and society and especially science, the media, the public and policy makers. Metaphors have varied 'resonance' in different contexts (Baake 2003), which belies attempts to keep technical and popular meanings distinct. Representing bacteria *as* intelligent agents; representing the management of healthcare-associated infections as a war; representing cleaning *as* the ultimate solution and matrons *as* guardians of purity, all this has implications for behaviour and action in science as well as practice.

Some caution is required in extrapolating these ideas to the issue of what the public themselves may think. The link between mass media portrayals of disease and lay thinking is under-explored, despite some important exceptions (Miller *et al.* 1998, Joffe and Haarloff 2002). The importance however lies in the work done by the metaphors identified here to 'organize the field of social intelligibility' (Greenberg 2000). Indeed, self-report data (Gill *et al.* 2005) indicate that nurses themselves are likely to indicate that the mass media are their major source of information on MRSA. Thus, the frameworks of intelligibility may have implications for practice or action at ward level.

In this fight against MRSA, cleanliness, which like the matron, has a moral force in its own right (Douglas 1966), has become a central feature. The fact that the issue was formulated in this way, with alignments highlighted between infection control and cleanliness, is particularly noteworthy when this formulation is contrasted with more technical discourse on the subject. There is presently a lack of direct, supportive scientific evidence, and considerable scientific uncertainty surrounding the effectiveness of cleanliness on its own. The issue of infection control, and containment of MRSA in particular, relies on the multiplicity of factors such as isolation measures, handwashing by hospital staff, screening of patients upon arrival, screening and decolonization of healthcare workers, such that cleanliness is only one component of an infection control strategy (Loveday *et al.* 2006). As Voss states (2004: 521), 'these measures work only when used in a concerted manner. Thus to single out one or a few measures, especially on the basis of limited evidence, risks potentially effective measures being neglected in future guidelines.' So, in media discourse, the idea of cleanliness is cast as a metonym for infection control as a whole, and the matron plays a similar role by standing in for the whole health care staff and their involvement in infection control. The terms in which it is framed are profoundly moral in the sense that they are bound up with evaluations of good and evil, clean and dirty and the putative filth of the present day is contrasted with the imagined spotlessness of hospitals in the past, underscoring Sjoberg's (2000) insistence on a moral dimension to risk perception. This dimension, especially where nursing is concerned, is particularly important to grasp as the contemporary role of matrons is exercised through organizational authority, which differs from their popular image (Barrett 2003). Nursing's image as a whole is dominated by feminized notions of what has been called the 'handmaid role' (Porter 1992) and it has struggled with medical hegemony (Coombs and Ersser 2004) as it has striven to professionalize itself. The mass media representations identified here have more to do with an archaic model of the profession rather than the contemporary emphasis on assessment and evidence-based intervention (Gardner *et al.* 2007). Thus, formulations of what nursing is about allude to primordial narratives and metaphors rather than present day hospital practice.

In 1995, the urgency of 'fighting' MRSA was highlighted in the UK press, and like the actors in Latour's (1988) account of the origins of bacteriology, the microbes had personalities, wit and cunning. This urgency of action against evil forces was enhanced when real people, patients, victims, joined the call for action in 2000 and when matrons joined the struggle in the early 21st century. In 2006, a different process seems to be taking place, one of normalization of the threat of MRSA and a shifting of attention towards other rising types of bacterial enemies, such as *C. difficile*. As Armando Iannucci wrote in his 'guide to this year's hospital superbugs' in a tongue-in-cheek piece for the *Observer* on 30 July 2006, when a first draft of this paper was written: 'MRSA is so old hat.' What once, 10 years ago, was framed in terms of creation myth and a story of good and evil forces, has now, in the final phase of its moral career, become almost banal and commonplace—but no less dangerous.

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