'Not rocket science' or 'no silver bullet'?

Media and government discourses about MRSA and cleanliness

> Exclusive - Dirty wards are raided by team of MRSA victims (Sunday Mirror, January 15, 2006):
> Victims of the MRSA superbug have carried out a cleaning blitz on hospitals. […] BBC3 reporter Tim Samuels, who organised the mass clean-up for a shock documentary, said: "Mops were covered in filth after just a few minutes." The teams also visited a slaughterhouse to compare its hygiene standards with hospitals. After seeing the shock footage, germ expert Professor Hugh Pennington said the abattoir had "a higher ethos of hygiene than the average NHS hospital". […] Unison chief Dave Prentis last night said ministers must follow Holland's lead. He said: "Getting rid of these superbugs is *not rocket science*. It's time to get back to basics. "Get more cleaners on the wards and make them part of the NHS infection control team. (Italics added)
>
> MRSA: the issue explained (Guardian March 9, 2005):
> The fight against the hospital superbug MRSA which has been taking place on wards is at the heart of a new political battle being fought in the run-up to the next general election. […] Speaking at a public sector summit in February, Mr Howard declared that patients were dying in hospital because doctors and nurses were preoccupied by meeting government targets and were reluctant or prevented from closing wards infected with MRSA. He said: "It is a scandalous state of affairs. It means that people are almost certainly dying in the wards because of government targets." Health minister Lord Warner, referring to MRSA, said there was "*no silver bullet*" to defeat the hospital superbug. (Italics added)

Introduction

Cases of Methicilin Resistant Staphylococcus Aureus (MRSA) - strains of bacteria resistant to a number of antibiotics, including methicilin, a derivative of penicillin - have been rising in the UK since the 1990s. MRSA infections, especially if they get into the bloodstream, can result in disability and death. The causes for the rise and spread of MRSA are not clear, but contributing factors may include the emergence of the epidemic strains EMRSA-15 and EMRSA-16, failure to introduce and maintain suitable infection control procedures, particularly handwashing, increases in movement of patients, visitors and staff, inadequate ward staffing levels, inadequate

isolation facilities, high bed occupancy rates, and overall poor hospital cleanliness (see Rampling *et al*. 2001, Grundmann *et al*. 2002; Enright 2005 for an overview).

This paper explores how the scientific uncertainty surrounding the origin, spread and treatment of MRSA has been exploited within the media and policy-circles to frame the problem of MRSA and the solution to this problem in particular ways and to particular political ends. Using established techniques of corpus linguistics and discourse analysis, we will examine the assumptions, judgements and contentions that structure two dominant frames highlighted in the above newspaper extracts: that dealing with MRSA is 'not rocket science', i.e. that the problem is amenable to a simple solution - if only one did things 'properly', and that there is no 'silver bullet' for dealing with MRSA, i.e. that this a very complex and multi-factorial problem, not amenable to simple solutions.

Applied linguistics deals with research into language with relevance to real world problems (Brumfit 2001: 169; Cook 2003: 5) and promotes principled and multidisciplinary approaches to language-related concerns in various fields (see the description of the journal Applied Linguistics - also the wikipedia entry on applied linguistics http://en.wikipedia.org/wiki/Applied_linguistics). This article studies the language used in debates about a real world problem, in this case the rise in deaths associated with MRSA infection in the UK. It does so from a multidisciplinary perspective, by integrating methods used in applied linguistics, namely corpus linguistics, with methods commonly used in the study of social representations of infectious diseases, namely discourse and frame analysis (Mansotte 2004; Wallis and Nerlich 2005; Washer 2006; Washer and Joffe 2006), and it does so in order to foster cross-disciplinary reflection and innovation. More particularly, the article aims to demonstrate how corpora collected and interrogated in a principled manner can be effectively used as repositories of information on particular ways of talking about an

event or issue. We will demonstrate how data drawn from a specialized corpus can provide empirical grounding to a type of discourse analysis known as 'frame analysis' which studies discourses in terms of storylines and meanings which are routinely conveyed through frames. We will also show how the interpretative approach used to identify frames can be combined with the quantitative methods of corpus linguistics to assist with (but not eliminate) the sensitive matter of 'an interpreter's bias' – a much discussed problem in (critical) discourse analysis (see Orpin 2005 for an overview; see also Teubert 2001; Stubbs 2006).

Background: the MRSA debate in the UK

The emergence of MRSA, together with other antibiotic resistant strains of bacteria, may signal the advent of a post-antibiotic era when the advances in Western bio-medicine have lost their power (James, 2007). Concerns about this problem have increased in Great Britain since the 1990s and social scientists have begun to study the social and cultural factors that might contribute to the problem, as well as the social and cultural framing of debates about MRSA and other healthcare associated infections (HCAIs) in the media and their impact on policy as well as on public understanding of health and illness (Childs, 2006; Nerlich and Koteyko, 2008; Washer and Joffe, 2006). However, the language used in these debates has not yet been studied in any great detail.

The issue of MRSA has been increasingly politicized in the UK, especially in the period leading up to the 2005 General Election. Government reports produced during that period focused mainly on cleanliness and on modern matrons as guardians of cleanliness as solutions to the problems posed by MRSA (Crawford *et al.* in press) for reasons that will be explored further in this article (see DH, 2004; Jones, 2004). As we will see, this was, in part, the outcome of discursive framing. In the words of Peter Conrad (1997: 140) 'how we frame a problem often includes what range of solutions we see as possible'. In this article we will examine how solutions to the

problem of MRSA were discursively framed, defended and contested by various actors and coalitions of actors using a limited range of key words and key phrases.

Methods and conceptual framework

The paper uses corpus linguistic techniques and discourse analysis to gain a better understanding of the different interests, values and normative judgements that informed debates about the problem of MRSA in the UK. To do this, we identified the main discourses about MRSA between 1995 and 2006 and examined how they were represented in the media. We use Dryzek's (1997: 8) working definition of discourse:

> A discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts. Each discourse rests on assumptions, judgements and contentions that provide the basic terms for analysis, debates, agreements and disagreements.

Within critical discourse analysis (CDA), there has been ongoing interest in how texts position readers to view social and political events in a particular way (Fairclough 2001; Wodak 2003). In parallel with the growing interest in CDA, an analytical tool known as frame analysis has been widely used to study newspaper discourse and political news in particular, especially in the fields of policy analysis, media analysis and science and technology studies, where frames are explored as shared cultural tools for the creation and interpretation of meaning in context (Van Gorp 2005, 2007). Frame analysis can therefore serve as a methodological bridge between applied linguistics, CDA and the social study of science and society. According to Entman (1993: 53), to frame is 'to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or

treatment recommendation for the item prescribed.' Frames can thus 'diagnose, evaluate and prescribe'. Frames call attention to some aspects of reality while obscuring other elements, which may promote different reactions in audiences. Politicians seeking support for certain policies or views are thus 'compelled to compete with each other and with journalists over news frames' (p. 55). It is especially important to study linguistic framing in depth where real-world issues are concerned that lie at the intersection between science and politics, such as HCAIs.

Together with the concept of frame, we employ Hajer's (1995) concept of 'storyline' to explore how different framings of causes for the rise in MRSA led to heated debates over 'solutions' and generated discourses of blame and counter-blame. Storylines are devices through which actors are positioned, and through which specific ideas of 'blame', 'responsibility', 'urgency' and 'responsible behaviour' are attributed. Through storylines actors can be constructed as victims, problem solvers, perpetrators, top scientists, or even scaremongers (see Hajer 1995: 64-5). We will also take account of other framing devices discussed by Entman (1991), such as: sources (all people directly quoted in the text); keywords (words that appear frequently in the body of stories, or words that have particular salience due to their placement within the text or their cultural resonance for the news audience); metaphors (the figures of speech in which a word for one concept or thing is mapped onto another to suggest likeliness between them); agency (the person or group identified as causing or solving the problem; the causal force that created the newsworthy act).

Although frame analysis has been applied successfully in many fields, users of this method have had difficulties in finding a reliable tool for the identification of frames and storylines that goes beyond subjective judgement (Van Gorp 2007). In this paper we argue that corpus linguistics, especially small corpus discourse analysis or corpus-assisted discourse studies (Partington, Morley and Haarman 2003), provides such a tool. The abstract nature of frames calls for an integration or 'mixing'

(Todd *et al.* 2004) of the interpretative approaches of qualitative methods with quantitative research methods (Van Corp 2007). Specialized corpora can for example be constructed to examine a particular kind of discourse at a particular period in time (Teubert 2001; Koteyko 2006). The use of such corpora can have several advantages. They can serve as an electronic archive of texts where individual texts are accessible for detailed examination and they can also be used to support claims about findings. The analyst may shift backward and forward between the data provided by concordances and the whole texts themselves, and observations made about a particular text can be compared with the data of the whole corpus to test hypotheses further.

Computational tools such as concordances, collocation and word lists developed for processing large volumes of real language data (Sinclair 1991) can be a valuable supplement both for quantitative and qualitative studies of discourse. Corpus linguistics can be used as a 'diagnostic tool' (Adolphs *et al.* 2004) for revealing trends and patterns, which provide valuable evidence for the constitutive power of language in theories of society and culture (Piper 2000). In this paper we would like to take this assumption further and explore the role of corpus linguistic techniques in establishing the thematic groupings around which particular discourses, frames and storylines have evolved.

During the literature review stage of our project[i], we examined media coverage, scientific literature and policy documents dealing with the spread of MRSA in UK hospitals. In the course of this manual qualitative analysis, texts were read to determine specific patterns in an attempt to identify possible frames and framing devices. The simple/not simple or not rocket science/no silver bullet dichotomy in the arguments regarding the causes and solutions for the MRSA problem attracted our attention. In this way, we arrived inductively at two major frames (invoked by the two texts at the beginning of our paper), and identified several keywords[ii] that are most indicative of these frames: the adjectives 'simple' 'basic' and 'proper' were

found to be consistently used when framing the rise of MRSA and methods for reducing its spread[iii]. We then went on to test our hypothesis using the quantitative methods offered by corpus linguistics. We aimed to determine to what extent these and other devices are present in media and policy discourses and how they function in framing various discourses. The results of this undertaking are reported in this article.

Particular attention was paid to the examination of concordances[iv] because the display of a number of contexts on the vertical axis allows for generalisations to be made about different uses of a word[v]. In this way, the cumulative evidence in concordance lines can reveal different 'patterns' of meaning which can be semantic or pragmatic in nature. Corpus linguists refer to such patterns as 'semantic preference' and 'semantic prosody' (Sinclair 1991; Louw 1993), or, more recently 'semantic associations' (Hoey 2006: 41). Through semantic associations it is possible to identify both the social domains with which lexical items are associated (Orpin 2005:49) and the societal value judgments they carry. The study of concordances therefore gives the analyst access to patterns of meaning and an assessment of the salience of words and word combinations.

This type of quantitative pattern recognition avoids the danger of cherry picking individual texts to suit the researcher's own political agenda (Partington 2004:13; Orpin 2005:38). In this way, as Stubbs points out (2006: 32), 'social constructivism can be tackled empirically if we observe by empirical means, with computational tools, areas of meaning where language [or rather certain actors using language for certain ends] uses recurrent wordings or phrases' (in our case in order to promote a particular problem definition and frame a particular solution to the problem). This can help explain 'how particular repetitions arise across a speech community and in this way demonstrate how corpus studies can progress from description to explanation' (2006: 34).

Using concordances and the information in the rest of the text through 'enlarge paragraph' and 'view text' functions of the Wordsmith software (e.g. information on the attributions of quotes and details of the publication), we identified patterns and regularities in the use of particular lexical resources and revealed discursive strategies and storylines adopted by various actors and discourse coalitions ('sources' in Entman's terminology) engaged in debates around MRSA. We focused on two types of corpora, newspaper articles and policy documents, in order to compare and contrast two types of 'ideological' framing.

Data

Newspaper Corpus

A corpus of 801 British national newspaper articles (642 thousand words) was compiled using the LexisNexis database where either of the terms 'simple', 'proper' or 'basic' were used in the context of the keyword 'MRSA' for the whole period of media attention to this biorisk (i.e. from 1995 to the present[vi]). As can be seen from Figure 1, the majority of these media texts appeared in ostensibly right wing press. Newspapers with editorials across the political spectrum carried stories but the tabloids published the most articles. Newspapers regarded as having editorials sympathetic to the Conservative Party (sitting in opposition to the Labour government throughout the period under analysis) ran the most articles. The Daily Mail and Mail on Sunday carried 100 more stories (n=178) than The Mirror and The Sunday Mirror (78). The Times and Sunday Times (101) carried 31 more pieces than the Guardian (48) and the Observer (22).

Newspaper	Number of articles
Daily Mail and Mail on Sunday	178
News International Newspapers Information Services Ltd.	104
The Times and Sunday Times	101
The Express Newspapers	95

The Mirror and The Sunday Mirror	78
The Independent and Independent on Sunday (London)	52
The Guardian (London)	48
The Daily and Sunday Telegraph (London)	39
The Sunday Express	35
The Observer	22
The Express	21
Financial Times (London)	16
Morning Star	7
The People	5

Figure 1. Publications in Newspaper Corpus

Policy Corpus

A corpus of key government policies on MRSA and infection control in hospital settings issued between 1998 and 2006, available via the website 'National Resource for Infection Control' (www.nric.org.uk), was compiled and examined for similar collocations to those highlighted in the Newspaper Corpus in order to trace networks of 'simple/not simple' discourses around MRSA. Ten policies (see Appendix 1) were downloaded and converted to text format totaling 174 thousand words.

In the following we shall first provide an overview of the 'behaviour' of the keywords 'simple, 'basic' and 'proper' in the newspaper corpus. This will be followed by a more detailed analysis of the use of these words in the newspaper and policy corpus and an analysis of their use in two dominant discourses, those of blame and counter-blame.

Exploring the use of framing keywords: the adjectives 'simple', 'basic' and 'proper'

The adjectives 'simple', 'basic' and 'proper' were used (396), (457) and (239) times respectively in the Newspaper Corpus. The examination of concordances and collocational profiles shows that 'simple' and 'basic' occur either together with the word 'solution' or with nouns denoting the suggested solutions which, in the

overwhelming majority of cases, are 'cleanliness' and 'handwashing'. (Throughout the following analysis our emphasis on particular instances of language use in quotations will be registered by the use of emboldened text.)

The adjective 'proper' was mainly used in contexts where negative judgements are expressed. Although *proper* appears out of context to refer to that which is acceptable and right, its typical uses observed by Stubbs (2000: 16) seem to indicate that in practice it is only, or largely, used when what is acceptable and right is under threat:

…hinders proper training;

… totally outside proper democratic control;

…unless proper care be taken to improve it;

…My family tell me that I should stop dreaming and get myself a proper job.

According to Stubbs, 'proper' typically co-occurs with: negatives, such as *no*, *not*, *never*, *can't*; words such as *fail*, *need*, *without*; words which imply warnings and criticisms. In the texts gathered for our Newspaper Corpus 'proper' is frequently used in the phrases 'proper handwashing', 'proper cleaning/cleanliness', and 'proper hygiene' preceded by the above negatives and the verb need (15). The co-occurrence with lack' (8), 'standards' (8) and the modal verb 'should' (8) brings further evidence for the use of this adjective in the expression of moral judgements (see also instances in Appendix 2.7).

The adjective 'basic', often used in such combinations as 'failing to meet basic standards of hygiene' or 'failing to follow basic hygiene rules', also displays preference for negatively charged lexical items, such as fail (37), lack (18) and poor (11). Some other collocates of 'basic' are hygiene (44), rules (30), date (23), cleaning (21), health (19), standards (18), infection (17), follow (16), mrsa (14), patients (14), and should (13). See also Appendix 2.1 for more lexicalizations of

negativity, such as the use of the negative form of the verbs 'follow', 'comply', 'observe' and 'do'.

A similar tendency can be observed in the case of the adjective 'simple' and will be discussed below. For now, we provide a brief illustration of the role of these adjectives in the blame-shifting discourse with the help of a single text where all of them are used. In this text entitled 'Harney blames staff for MRSA' (Daily Mail, February 18, 2006) the Irish Health Minister Mary Harney was quoted as saying that lack of funding was not an excuse for poor cleaning and calling hygiene 'something very **basic**' which the public was entitled to expect. The article then quoted the opposition Irish Labour Party health spokesman Mrs Liz McManus who 'accused the Minister of 'passing the buck'' saying that 'the **simple** solution to that is to make sure the **proper** resources are there to ensure a **proper**, clean environment for both staff and patients.'

The above examples show how the adjectives 'simple', 'basic' and 'proper' are used mainly to evaluate, judge and indeed blame others for perceived failures in policy or action. As many corpus linguistic studies of evaluation show, moral judgments can be lexicalised in a number of ways (e.g. Stubbs 2000; Hunston 2004). In the texts we chose for our analysis this was done most notably through the use of the adjectives 'proper' and 'basic'. The high frequency of the adjective 'simple' and the use of a more emphatic expression 'it is not rocket science' seem to contribute to the negative evaluation. One is rarely blamed for not accomplishing a task which is recognised to be complex and difficult, but the failure to do something which is perceived to be easy inevitably incurs judgement. The adjectives thus constitute an important element in the discourse of blame. This discourse is linked in various ways to the public outcry over the rise of MRSA and to a call for a return to 'good (old) standards' (see below), where the emphasis is on tested and 'common sense' measures such as handwashing and environmental cleanliness which are considered effective means of reducing hospital-acquired infection (Pittet *et al*. 2000).

According to Entman's model of framing, where frames have the capacity 'to diagnose, evaluate and prescribe', sentences that include 'simple', 'basic', 'proper' and the expression 'not rocket science' deal with 'prescribing the treatment necessary'. In a context where calls for 'simple handwashing', 'basic cleanliness' and 'proper cleaning' are prevalent[vii] were dominant, MRSA is discussed as a problem that is amenable to simple solutions, if only certain people/institutions handled things in the right way.

Following this initial overview, we shall now explore closely how the problem of MRSA is 'diagnosed' and what treatments are prescribed. We will examine the co-text of 'simple' in our corpus of texts reporting on MRSA and compare it with its use in the corpus of policies. It is expected that concordances of this keyword and the enlarged contexts of its use will help identify which storylines are told about MRSA by whom and for what reason.

MRSA storylines in Newspaper Corpus

A first look at the concordances of 'simple' in our corpus of British newspapers reveals a significant proportion of contexts where 'simple' is preceded by negation lexicalised as 'not' or 'no'. This tendency is best illustrated with concordances of 'simple' with 'solution' as a context word (Scott 1999). The concordances (Figure 2) show a clear division between arguments representing MRSA as a problem that has a simple solution vs. those representing it as a problem that does not have a simple solution. We therefore chose 'simple' as the main keyword to illustrate the arguments and sources (Entman 1991) involving either the 'it is not rocket science', i.e. 'it is

simple' frame or the 'there is not silver bullet', i.e. 'it is not simple' frame.

N	Concordance
1	Ms Beasley added: "There is no one simple solution to preventing infection,
2	d learn useful lessons. There is no one simple solution to preventing infection,
3	also move positively towards finding a simple but effective solution to a grow
4	Nursing Officer, said: "There is no one simple solution to preventing infectio
5	s own powers a hundredfold. GRAPHIC: SIMPLE SOLUTION: EXPERTSSAY MRSAWOULD
6	y doctors. THE solution is not as simple as doctors washing their hands.
7	meone carrying the illness. So the simple solution would appear to be a ra
8	d learn useful lessons. There is no one simple solution to preventing infection,
9	And the solution to this problem is as simple as that." Infection that c
10	tandards of cleanliness. There is no one simple solution to preventing infection
11	complex problem and there is no single, simple solution. Nor are we going to b
12	tandards of cleanliness. There is no one simple solution to preventing infection
13	e. The tragedy is that there is a simple solution. Hospitals need
14	ing at all times? It seems such a simple solution! Bob MacDougall, K
15	is going to get unclean. 'But the simple solution to that is to make sure
16	S; 30 LENGTH: 133 words HEADLINE: Simple solution to the growing MRSAmen
17	superbug crisis is (in large part) quite simple . It involves cleanliness in the
18	Dr Malyszewicz says the solution is simple : "Hospitals should start using

Figure 2. Concordances of 'simple' + 'solution' in the Newspaper Corpus

Upon closer study of source texts where 'simple' was preceded by 'not' or 'no' it was found that the existence of simple solutions is denied by government officials such as John Reid, the then Health Minister, Christine Beasley, the Chief Nursing Officer and NHS representatives.

> Chief Nursing Officer Christine Beasley said: 'There is **no one simple solution** to preventing infection, but we are taking a whole range of actions in fighting the superbug and it's a top priority for this Government and the NHS'. (Mirror, February 25, 2005)

The analysis of the concordances of 'simple' (where it is not preceded by negation) for its top collocates 'hygiene', 'handwashing' and 'cleanliness' (Appendix 2.2) helped to identify two broad discourses of blame in the discussion of MRSA spread in hospitals. We have labelled these: 'basic hygiene discourse' and 'government targets discourse'. (These should not be treated as definitive descriptions or categories, but

rather as useful thematic groupings that can provide insight into the complexities of the debate).

The 'basic hygiene discourse' focuses on the lack of cleanliness and poor compliance with hand-washing in general (storyline: it's all down to hospital cleanliness; hygiene standards have slipped and the government is to blame for it). The main actors in this discourse coalition are patients' advocates and patients' unions, the hospital cleaners union Unison that blames contracted cleaning, and oppositional political parties.

Typically, actors of this discourse coalition talk about lack of hygiene as the main cause of the MRSA spread and suggest a 'simple, common sense' solution (although in a rather Eureka-like manner) for raising hygiene standards. In early 2005 a poster campaign by the Conservative Party tapped into this type of discourse with posters that asked: 'I mean, how hard is it to keep a hospital clean'. Other examples in our corpus are as follows (see also Figure 2 above and concordances of 'not rocket science' in Appendix 2.4):

> The tragedy is that **there is a simple solution**. Hospitals need to return to levels of cleanliness that were taken for granted only a few years ago. (Daily Mail, July 12, 2004)
>
> Is it not time the guidelines were strictly enforced by hospitals and medical staff, patients and visitors educated on the need for **basic** handwashing at all times? It seems **such a simple solution**! (Section: Letters, The Express, August 2, 2006 followed by an image entitled: 'Habits: Cleanliness will wipe out superbugs such as MRSA')

Appeals are made to the long established role of cleaning in combating and preventing infection and its relative simplicity (compared to other control measures such as screening) in addressing the general public. The use of cleaning in the hope

of containing infection has a long history that goes back to the discoveries of Lister and Semmelweis (but has been practiced much earlier). Cleaning is thus something familiar, a tried and tested solution that is simple and 'works' and which is therefore bound to be suggested as a first resort. As one newspaper puts it:

> Cleanliness is certainly next to healthiness. Catching bugs in hospitals is not a new phenomenon. It dates back 150 years to the troubles of Professor Ignaz Semmelweiss in Vienna. He dramatically reduced the death toll among new mothers by a **simple** change in the ward routine. He made sure everyone washed their hands before examining his women patients.

Such collocates of 'clean' as 'old' (21) and 'good' (28) evoke the discourse of 'good old days' when the matriachical figure of the matron was in charge of hospital cleanliness, and provide further evidence for the framing of the problem of MRSA as amenable to 'simple', 'tried and tested' solutions.

N	Concordance
1	le off" is not done. In the old days a good matron woul
2	e basics. In the good old days, wards were kept s
3	many to yearn for the good old days, when matron knew
4	ars before 1997 as the good old days. Then it was three
5	ccustomed to it in the good old NHS. As a former
6	it is good to note that the old- fashioned matron is back
7	he traditional method, good old- fashioned soap and water

It should be noted that the 'simple/not simply' dichotomy of arguments was apparent not only when arguing about solutions to the MRSA problem but also in arguments about its causes.

> UNISON general secretary Dave Prentis retorted that the government

> should concentrate on the real cause of the MRSA epidemic: 'You don't need the best brains in Europe to realise that clean hospitals are the key to beating superbugs (Morning Star, December 16, 2004).

The 'government targets discourse' coalition focuses on NHS targets introduced by Labour to cut waiting lists and seems to be engaged in a similar discourse of blaming and shaming: the storyline is 'government targets lead to the spread of infection as hospital staff cannot close the infected wards and have to treat a higher number of patients' or, as the Conservatives put it 'people are dying because of Mr. Blair's targets' (see the collocation 'government targets' in Appendix 2.5). The Liberal Democrat health spokesman Paul Burstow used targets to connect it all:

> The NHS has been fighting a losing battle against superbugs. The problems began under the Conservatives when they ordered hospitals to contract out their cleaning on the cheap. Labour have made things worse by giving political targets a higher priority than cleaning hospitals and fighting infections. Under the Liberal Democrats, preventing, controlling and containing the spread of infection would no longer take second place to political targets. (Guardian, February 25, 2005)

This theme is favoured not only by the political and patient advocates, but also by hospital staff as they need to respond to accusations of carelessness or forgetting about simple handwashing - concordances of 'targets' and their source texts revealed several nurses 'speaking' about increased workloads. Another defensive stance is taken when high bed occupancy rates, linked to government targets, are mentioned as the cause of the MRSA spread. The discursive frame is the same: it would be simple to control infection if it were not for government targets[viii].

So what was the (national) government's response to all these criticisms? According to statements by government officials quoted in our newspaper corpus, the government is portrayed as having responded to public concern with the introduction of 'standards of cleanliness' and a host of other initiatives (see the next section). The words 'simple' and 'basic' are used to deny the simplicity of measures needed to combat MRSA. The 'superbug' is framed as a complex problem requiring a host of measures to combat it successfully. This type of defensive discourse was, as indicated in the title of our paper, typified by the use of the phrase: 'there is no silver bullet', although our corpus only contained sporadic instances of that phrase (but see Dancer 2005).

> Health minister Lord Warner, referring to MRSA, said there was 'no silver bullet' to defeat the hospital superbug. (Guardian, March 9, 2005).

John Reid, the former Health Minister, also stressed the 'not simple' aspects of dealing with MRSA (Appendix 2.6) in a speech, from which we quote the following extract:

> It's a difficult and complex problem and there is **no single, simple solution**. Nor are we going to be able to stop people catching infections when in hospital. (Sunday Express, December 7, 2003)

Policy Corpus: the national government storyline on MRSA

In response to pressure exerted by the dominant 'basic cleaning' discourse, the UK Government issued a number of policies which mostly tried to deal with concerns about cleanliness. 'Modern matrons' were introduced in 2001 to establish 'a cleanliness culture across their units'. Other policies also focus on cleanliness, evident either from their titles such as 'Towards cleaner hospitals and lower rates of

infection', 'Essential steps for safe, clean care' or 'Wipe it out' (see the list of policies in Appendix 1) or through the prioritization of cleaning and handwashing in the main body of the document (a wordlist generated for all 10 policies shows that 'cleaning' (184) and 'cleanliness' (84), followed by 'handwashing' (111) are much more frequently mentioned than other infection control procedures such as, e.g. 'screening' (63)).

No occurrences of 'proper' or 'basic' were found in the corpus. A few uses of 'simple' echo the media generated frame 'it is all down to simple cleaning/handwashing' where 'simple' means 'not complex' .

> […] At its heart is attention to cleanliness and hygiene in all their manifestations. These extend from the thoroughness of the work done by cleaning staff to **simple** hand-washing by health care professionals in contact with patients. (The Path of Least Resistance)
> Hospital cleaning staff are there to ensure a high and consistent standard of cleanliness. But the best cleaner cannot be everywhere at once - if all members of staff took care to work tidily, and to clean up after themselves, cleanliness standards across the whole hospital would rise […] It means **simple, everyday actions** we all take for granted at home - such as wiping quickly round the bath after a patient has used it. (Matron's Charter)

However, when explaining the causes for the spread of MRSA the discourse of the UK government policies moves from simple actions to complex causes:

> No single factor explains the growth in the number of patients who acquire infections during the course of their treatment and care by the NHS or other healthcare systems around the world. The factors which have driven, and

continue to drive, the worrying increase in healthcare associated infection are multiple […] (Winning Ways)

The rise in MRSA rates is said to be 'unavoidable' and has to do with 'years of prescribing antibiotics' and the power of evolution (The Path of Least Resistance).

The study of concordances also reveals that there is another, policy-specific use of the adjective 'simple'. In the corpus of government publications 'simple' appears to be part of the 'managerial speak' that dominates NHS policies (Figure 2 below). Here 'simple' is predominantly used to mean 'easy to implement'. As all measures demanded by policies cost money, cost-benefit analysis comes into the equation and brings with it a demand for a reduction of complexity – as complexity costs money.

N	Concordance
1	ed unit was clean and ready for another child. The signs are attractive and fit with other signs on the ward. This simple cost- effective measure has improved communication between the ward teams - even at the busiest times.
2	targets and maintained low rates for MRSA. 5 Towards cleaner hospitals and lower rates of infection Simple but effective The housekeeping team for the children's ward at Kettering General Hospital introduced a simple
3	es for handwashing Effective handwashing procedures can remove all transient bacteria. The adoption of this simple but effective technique has been demonstrated to significantly reduce rates of hospital acquired infection.
4	fections in England (published in December 2003). It is clear that the risks of contracting MRSA can be reduced with simple and effective infection control measures. In 2003/4 Sheffield Teaching Hospitals NHS Trust, Harrogate Health C

Figure 3. Concordances of 'simple' in Policy Corpus (extended context)

The response to MRSA seems to have fallen within the audit culture of the present day British National Health Service (Lynch 2004) as newly developed standards of cleanliness became part of the broader 'Standards for Better Health' program introduced by the Department of Health in 2004. As the data from the policy corpus shows, 'standards' (31) is the second frequent lexical collocate of 'clean', after 'infection' (50). In contrast to other infection control measures, cleaning and

cleanliness can be easily subjected to a multiplicity of auditing procedures. This may be one of the reasons why the star ratings produced by the British National Healthcare Commission happened to measure only general hospital cleanliness sidelining more complex measures of infection levels, bacteria or germs.

The easy to implement and cost-effective measure of cleaning also enabled the Government to respond to pressure from patients' groups calling for 'more power to patients' because anybody is able to comment on the satisfactory vs. unsatisfactory level of cleanliness in a hospital or notice if hospital staff do not adhere to the practice of handwashing. According to the 'Matron's Charter' patients could take part in surveillance and monitoring of the standards of cleanliness whereas they remained relatively powerless in, say, demanding screening or isolation facilities.

Framing MRSA as a simple problem and the discourse of blame

The frequent use of 'simple', 'basic' and 'not rocket science' together with the focus on 'doing things properly' indicates deliberate efforts to discuss the problem in the light of 'simple solutions' and in this way promote a particular problem definition and prescribe a specific treatment - a process known as framing. Below we will examine the implications of the 'not rocket science' frame where cleanliness, handwashing and Government targets are discussed as simple solutions to the problem of MRSA.

Despite suggestions that handwashing (e.g. Akyol *et al*. 2006) and a clean hospital environment (Rampling *et al*. 2001) help bring down infection rates, scientists continue to emphasize that cleanliness may not be the only contributing factor, i.e. that simple solutions are not the answer (Enright 2005). This line of argument is readily taken up by the government. At the same time, the argument that MRSA is easy to combat is being expanded as the proponents of 'simple solutions' draw selectively on science choosing the studies that confirm the effectiveness of 'tried and tested' methods on the one hand, and appealing to 'common sense' and the sense of propriety on the other to support their claims for

more hygienic interventions. This multiplicity of perspectives should be taken into account when suggesting explanations for the framing of MRSA containment as a 'simple issue' and as a 'complex problem'.

Frames work by making some bits information about an item more salient than others and by linking them to shared cultural narratives (about hygiene and health, for example). As such a piece of information becomes more noticeable, it also becomes more meaningful or memorable to audiences. Although texts commonly make bits of information more salient through placement or repetition it should not be forgotten that 'even a single unillustrated appearance of a notion in an obscure part of the text can be highly salient if it concords with the existing schemata in a receiver's belief systems' (Entman 1993: 53). The association with culturally familiar symbols thus plays a prominent role in political communication where issues are normally carefully framed. As the analysis of our texts has shown, this concept of familiarity was widely exploited in the debate about causes and means of preventing MRSA infection, as everybody knows what it means for something to be 'clean'.

In order to gain broad popularity and public support, political news texts aim to operate within the linguistic competences and expectations of the majority of readers. Texts in general, and political texts in particular, are most successful and 'popular' when they can reaffirm the validity of the strategies and conventions that the readers have for making sense of the world. In this respect, Radway (1978) points to a parallel between the empirical use of language and formulaic popular literature: 'It is possible to think (...) of the 'popular' author as one who arranges the common elements of the literary text into familiar sequences which depend upon generally accepted, well-known meanings, providing the reader with the expressions he anticipates.' (Radway 1978: 96) - something journalists too are all to familiar with.

Presenting MRSA as a problem amenable to simple solutions such as cleanliness, handwashing or the abolishment of NHS targets works as a reassurance

that things are, or will be, under control and thus is an important part of the strategy to develop trust. 'Cleaner Hospitals' are sold as a simple and uncontroversial promise on political manifestos – a promise which can be expected to be delivered. The decision to trust is influenced by the degree of familiarity. One can easily trust that the sun will rise again simply because this has happened unerringly before and has become familiar. The meaning of 'familiar things' has been relatively stable for a long period of time, and therefore what is familiar is taken to be 'self-evident' and commonsensical. In this way, the routinised and well-established practices of cleaning offer the establishment of 'basic trust' (Giddens 1992) - something which is seen as a given rather than actively negotiated.

The seeming cost-effectiveness of cleaning is an added bonus. As could be seen from the use of 'simple' in the policy documents, cleaning also seems to be the cheapest solution for the cash-strapped NHS. Furthermore, cleaning is something that everybody can participate in, from doctors and nurses down to patients and visitors. As a common practice it creates solidarity and gives people a feeling that everybody is 'is doing their bit'.

The frequent use of the adjectives 'proper', 'simple' and 'basic' together with the modal verb 'should' in relation to presenting solutions to the rise and spread of infections points to the existence of a moralistic discourse of blame. This discourse is rooted in a deeper (moral) meaning of cleanliness in relation to the way we organise ourselves in society, because from this perspective the call for more 'proper' cleaning indicates a general striving for order with the accompanying normative claims (Douglas 2002; Quitzau 2004).

Conclusion

For those working within a discourse analytic paradigm, the value of accessing computer-held corpora lies in boosting the empirical validity of their analyses. This study used specialized corpora and corpus linguistic tools to gather empirical

evidence for hypotheses about dominant frames used in debates about MRSA by various actors and coalitions of actors generated during the interpretative process of the literature review. This allowed us to validate qualitative 'hunches' using quantitative data.

The study of frames in media texts on MRSA has supported our hypothesis that coverage of MRSA is based on what one might call a simple/not simple discursive dichotomy, which is evoked in different discourses for two different purposes: to blame others and to defend oneself against blame. The first type of discourse attempts to foreground certainty while the second tries to foreground uncertainty. Although the two 'names' we used for the dominant frames, 'not rocket science' and 'no silver bullet' can be regarded themselves as a kind of framing (see Tankard 2001: 89), the results achieved through corpus linguistic analysis showed that they were more than just heuristic labelling devices.

As the risk analyst John Adams said, 'when the science is inconclusive people are liberated to argue from, and act upon, pre-established beliefs, convictions, prejudices and superstitions' (Adams 2005). In the case of MRSA putting cleanliness forward as the solution to the problem ties in with all of these. The government therefore appears to have stressed cleanliness as the established and common-sensical method of infection control in an attempt to foreground certainty, whereas opposition parties, patient advocates and cleaners' unions stress cleanliness, and thus also foreground certainty, to point out failures of government to tackle MRSA. However, when simple solutions fail, government, NHS management and hospital staff highlight the complexity of the MRSA problem and foreground the scientific uncertainty surrounding this issue. Simple cleanliness (not rocket science) is the dominant frame when advocating solutions to the problem of MRSA, whereas complexity (no silver bullet) is the dominant frame when challenging government policy or giving reasons for failures in policies dealing with the problem of MRSA.

In the post-modern era, with its scientific uncertainties and controversies covered in detail by the mass media, anything which looks like simple, tried and tested or ‘common sense’ seems to gain credence faster than complex or innovative solutions. The previously unknown phenomenon of antimicrobial resistance and the unprecedented rise in health care associated infections accompanied by controversial scientific advice have made cleanliness a popular storyline with a number of discourse coalitions which tend to employ hygiene as part of different but also interrelated argumentative strategies. The routinised practice of cleaning offers a reduction of unpredictability, which itself can be used to develop trust in politicians (and are especially appealing to right wing advocates of traditional and simple solutions) and provide ‘peace of mind’ o patients.

One of the implications of using the frame ‘dealing withMRSA is not rocket science’ is that the issue of antimicrobial resistance is represented as ‘secondary’ or only as ‘a part of the problem’. The crucial issue of resistance to treatment with antibiotics, which is part of the definition of MRSA, tends to be blended out and almost forgotten. Although labelled a 'superbug', MRSA therefore tends to be framed as an ‘ordinary’ bug that can be 'wiped out' with a 'simple' good scrub.

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Appendix 1: Policy Documents

1. Standing Medical Advisory Committee (SMAC) Sub-group on Antimicrobial Resistance, The Path of Least Resistance: summary and recommendations, (London: DH, 1998).
2. National Audit Office; Comptroller and Auditor General, The Management and Control of Hospital Acquired Infection in Acute NHS Trusts in England, (London: NAO, 2000).
3. Department of Health; Chief Medical Officer, Getting Ahead of the Curve: A strategy for combating infectious diseases (including other aspects of health protection), (London: DH, 2002).
4. Department of Health, Modern Matrons—Improving the Patient Experience, (London: DH, 2003).
5. Department of Health; Chief Medical Officer, Winning ways—working together to reduce healthcare acquired infection, (London: The Stationery Office, 2003).
6. Department of Health, Towards cleaner hospitals and lower rates of infection: a summary of action, (London: DH, 2004).
7. National Audit Office; Comptroller and Auditor General, Improving patient care by reducing the risk of hospital acquired infection: a progress report, (London: NAO, 2004).
8. Department of Health, Saving Lives: a delivery programme to reduce healthcare associated infection including MRSA, (London: DH, 2005).
9. Royal College of Nursing, Wipe It Out RCN Campaign on MRSA, (London: RCN, 2005).
10. Department of Health, Essential steps to safe, clean care. Introduction and guidance notes, (London: DH, 2006).

Appendix 2: Concordances in Newspaper Corpus

2.1 Concordances of ‘basic’

N	Concordance		
381	go "damp dusting", which helps prevent MRSA, was the	basic	task of all student nurses. But just like the
382	side is that staff have no spare time to think about	basic	things like handwashing. "Patient care s
383	the basics are nowhere near our basics in Africa the	basic	understanding of cleanliness is nowhere near.
384	uit more junior healthcare workers and improve their	basic	training; Improve the cleanliness of hos
385	anagers than beds, there is no place for the sort of	basic	standards of care that Florence Nightingale wo
386	nt across Britain, it is baffling to most people why	basic	rules of hygiene cannot be routinely adhered t
387	y highest standards of medical science combined with	basic	standards of patient care so poor they would b
388	s would be able to fight MRSA only when staff learnt	basic	rules of hygiene. "When I was a young nurse we
389	y and too many medical staff disregard even the most	basic	rules of hygiene, such as washing their hands
390	ailed to recognise that their disregard for the most	basic	rules of hygiene was a key factor in allowing
391	tless. While one third of England's hospitals failed	basic	sanitation checks in the autumn, hers was one
392	cause hospital staff are failing to observe the most	basic	rules of hygiene, while hospital authorities d
393	Hospital, Hackney, East London, yesterday, said that	basic	sanitation had "slipped off the agenda for too
394	hospital staff appear to have forgotten some of the	basic	rules of hygiene. We do not know if the
395	benefits mean the middle classes must pay twice for	basic	services, writes Niki Chesworth BYLINE: BY
396	ppears to be top-heavy with suits but lacking in the	basic	skills of floor sweeping, toilet scrubbing and
397	tory stank. There now appears to be no one to impose	basic	standards of hygiene." Leslie Ferguson,
398	ngale had shown why in the 19th century. By imposing	basic	standards of hygiene and sanitation in field h
399	an we do about it? Filthy hospitals with poor	basic	standards of hygiene are certainly partly to b
400	MRSA infection and the Government's efforts to raise	basic	standards of hospital hygiene are likely to ha
401	ritish hospitals are no longer able to meet the most	basic	standards of cleanliness and sanitation. I kno
402	More than one third of hospitals fail to follow	basic	rules which could stop the spread. And o
403	at NHS hospitals are no longer able to meet the most	basic	standards of cleanliness. We found mattr
404	man confirms that staff who consistenly fail to meet	basic	standards will be sacked. NHS bosses wil
405	ns that more needs to be done. One of the most	basic	ways of reducing infection is to have proper h
406	ursing staff and hospital administrators to invoke a	basic	, and simple, regime of ensuring that what is s
407	am sure that many of you will be shocked that these	basic	, common-sense measures are not already in plac
408	treat the bugs that flourish because of the lack of	basic	, hygienic practices. But this epitomises

2.2 Concordances of ‘simple’

N	Concordance									
1	"We need hand- washing between	patients.	Simple	,	common sense	hygiene	will	impro		
2	rd labour for hygiene obsessives.	Take a	simple	thing	like	making	the	bed.	To	me
3	n or animal.	Good	hygiene -	simple	steps	such	as	washing	hands	after
4	tron has to be brought	back to	teach the	simple	rules	of	hygiene	but	I'm	often ap
5	ce, we are suffering	from an	age- old and	simple	problem	like	lack	of	hygiene?You	
6	ce, we are suffering	from an	age- old and	simple	problem	like	lack	of	hygiene?You	
7	ific areas of clinical	hygiene,	like the	simple	matter	of	doctors	and	nurses	wash
8	Experts say MRSA can be tackled	by	simple	improvements	in	hygiene	-	such	as	
9	Prof Cormican stressed	that not	only is	simple	hygiene	the	best	way	to	tackle M
10	ed if hospital staff	stick to	strict but	simple	hygiene	rules	such	as	scrupulous	
11	of MRSA can be reduced	through	following	simple	hygiene	rules	in	hospitals.	It	is
12	risk of disease being	spread by	ignoring	simple	hygiene	rules.	Lets	hope	the	good
13	erbugs, such as MRSA,	simply by	following	simple	hygiene	procedures.			While	
14	ds are dirty and staff	are not	following	simple	hygiene	procedures	such	as	handwa	
15	Mr Unger, who has diabetes,	is angry	that	simple	hygiene	methods	could	have	preve	
16	inimise MRSA have thus	far failed.	Basic	simple	hygiene	measures	are	not	being	im
17	l wards.	He said: '	Everyone	knows	simple	hygiene	measures	are	the	most eff
18	ds on a regular basis.	The BMA	says	simple	hygiene	measures	could	immediately		
19	BYLINE: Paul Gallagher	BODY:		Simple	hygiene	and	small	groups	of	visit
20	be taken back to basics	to improve	their	simple	hygiene	and	cleanliness."			In
21	from cleaners to consultants,	to follow	simple	hand- washing	and	other	hygiene	p		
22	MRSAepidemic.	Lack of	hygiene and	simple	cleanliness	is	at	the	root	of the
23	to do with bad hygiene -	something	as a	simple	as	nurses	not	washing	their	hands
24	e such as Mrs Munro is	with	hygiene -	yet	simple	procedures	are	still	not	being p
25	itals is the medical	staff's	ignorance	of	simple	hygiene.	According	to	this	repor
26	tch, which would suggest	that some	of the	simple	hygiene	measures	being	practised		
27	that we have asked	everyone	to follow	is	simple	hand hygiene.	This	is	a	message

2.3 Concordances of ‘blame’

N	Concordance			
68	both hospitals and the community'. Doctors	blame	the spread of ESBL extended-spectrum beta l
69	n cleaned up. 'I don't blame the cleaners I	blame	the NHS for allowing private companies whos
70	talcum powder had been cleaned up. 'I don't	blame	the cleaners I blame the NHS for allowing p
71	compared with 3,110 in 1999. Health experts	blame	the overuse of antibiotics, which has led t
72	ply and thrive. But patients must share the	blame	too. Millions of parents, confronted with a
73	ions and at least 33 deaths, and laid part of the	blame	with managerial obsessions about hitting of
74	eaned until the next day. But it's easier to	blame	the public than to pay. LOAD-DATE:Janua
75	d have thrown us out on the spot." She went on to	blame	sloppy habits and too many Government targe
76	knee-jerk reaction from some quarters has been to	blame	the use of outside contractors for the fail
77	als? The consultants blame the unions. The unions	blame	the managers. The managers blame the minist
78	esponsible for his father's death. "Definitely we	blame	the hospital," he said. "If he had not got
79	ilthy visitors. Next thing you know, someone will	blame	the patients themselves. Do they have to bl
80	ities do little to enforce the rules, and the 'no	blame'	culture of the NHS means no one is account
81	ola Sturgeon warned a staff crisis was largely to	blame,	and said: "The problems plaguing the NHS h
82	fore. Insinuating that health staff were to	blame,	he said: "We need to reinforce the message
83	McMahonsaid overcrowded hospitals were partly to	blame.	"But basic hygiene is needed if one
84	he private sector, he insists, must shoulder some	blame.	'There is no doubt that we do see an
85	ms that simply being too clean could be partly to	blame.	A new study has shown a strong link
86	ation and one for which we have only ourselves to	blame.	Let us hope it is not too late to do
87	doubted that Bath's Royal United Hospital was to	blame.	Tragedy The judge ruled that d
88	terol diet, excessive smoking and drinking are to	blame.	"You might do more for Scotland's health b
89	al cleaners -the laziness of the Government is to	blame.	My husband died from MRSA and it needn't h
90	asic standards of hygiene are certainly partly to	blame.	Piles of rubbish and dirt are good breedin
91	actors that led to the situation and apportioning	blame.	Take responsibility only for what is your
92	be disrupted and which pressure group will be to	blame.	This week ITV News staged Election 2005, c
93	d still finishing up in the red. So who's to	blame?	In the NHS tradition that you pay dearly f

2.4 Concordances of ‘not rocket science’

N	Concordance			
1	rs properly. At the end of the day, this isn't	rocket	science and training shouldn't take nea
2	Karen Jennings, of Unison said: 'It is not	rocket	science the way to wipe out these bugs
3	to accommodate that. "Let's face it, it ain't	rocket	science to keep a hospital ward clean."
4	h Editor Jane Symons. Cleanliness is not	rocket	science - a lot of it comes down to bas
5	ing - and infecting - taps. "This is not	rocket	science, " he said. Mike Stone, c
6	hat's called the good standard. "It's not	rocket	science, it's very simple and, although
7	hat's called the good standard. "It's not	rocket	science, it's very simple. And although
8	e "Notting Hill set". "The next election isn't	rocket	science," she says. "Only promise what
9	lean. Wash hands and clean equipment. It isn't	rocket	science. AMY McCALLUM Perth
10	see. Some of the ways of tackling this are not	rocket	science. "Sometimes it is the old-
11	e said: "Getting rid of these superbugs is not	rocket	science. It's time to get back to basic
12	a contaminated pair of hands. It's not exactly	rocket	science." Dr Richard Slack, consu

2.5 Concordances of ’targets’

N	Concordance						
54	He blamed the Government's "obsession	with	targets	"	for the lack of cleanliness in ho
55	"Labour has a pathological obsession	with	targets	,	and statistics matter more in the
56	oblem firstly by getting rid of government	targets	,	and "allow the professionals to do
57	He attacked ministers' obsession	with	targets	,	especially as "there's probably n
58	But will a Government obsessed	with	targets	,	figures and management initiative
59	infections. 'We will scrap political	targets	,	whichnbsp;hold backnbsp;the fight
60	ns patients are dying because of Mr Blair's	targets	,"	Mr Howard said. Liberal De
61	ted with the superbug because of Whitehall	targets	.	"According to a National Au
62	found to be struggling to meet some of its	targets	.	"When I became a nurse in t
63	on has been the announcement of the latest	targets	.	"With regard to MRSA, I thi
64	ent care for the sake of hitting Government	targets	.	Last night, Heartlands' Chi
65	t them close wards because of waiting list	targets	.	Overcrowded hospitals make
66	eaknesses were around cancer waits and A&E	targets	.	There have been substantial
67	t year because it didn't meet cleanliness	targets	.	In February, cleaning logboo
68	ness grounds, because it would mean missing	targets	.	"This means patients are dying be
69	ys. "Now it is all about meeting government	targets	.	As soon as a patient arrives, we
70	this desire to increase removals and chase	targets	.	It is dangerous and playing with p
71	ns patients are dying because of Mr Blair's	targets	."	MRSA, methicillin- resistan
72	ical decisions just to satisfy politicians'	targets	."	The Trust confirmed such a
73	me accountability for failure to meet these	targets	."	The prevalence of the infec
74	s patients are dying because of Mr Blair's	targets	."	LOAD-DATE: February 26, 2005
75	roper training should take precedence over	targets	."	But last night Gillian Merron, th
76	ds patients are dying because of Mr Blair's	targets	."	He said a change of direction wa

2.6 Concordances of 'no/not simple'

N	Concordance						
1	sics of patient care. There is no	simple	way of reducing health care assoc
2	d learn useful lessons. There is no one	simple	solution to preventing infection,
3	SA superbug, but he claimed there is no	simple	causal link between infections an
4	MRSAsuperbug, but in fact there was no	simple	causal link. LOAD-DATE: Decem
5	infections aren't simple problems with	simple	answers, there are no swift solut
6	complex problem and there is no single,	simple	solution. Nor are we going to be
7	Nursing Officer, said: "There is no one	simple	solution to preventing infection
8	MRSAsuperbug, but he said there was no	simple	causal link between infections a

2.7 Concordances of 'proper'

N	Concordance		
105	y people and simple hygiene procedures such as	proper	handwashing can keep it at bay."
106	hirds of doctors and nurses still don't follow	proper	handwashing guidelines and that the su
107	"Hospitals have to make sure all staff have	proper	hand hygiene and are washing and treat
108	st basic ways of reducing infection is to have	proper	hand- washing facilities for staff, vis
109	ing hospital and leave local residents without	proper	healthcare? Government ministers
110	ters. "I do not think the staff are practising	proper	hygiene and the wards are not clean,"
111	uccessive bouts of infection. As we know, only	proper	hygiene controls in hospital can defea
112	laid bare for the first time. A lack of	proper	hygiene has meant that thousands of pa
113	ection because if the hospitals were clean and	proper	hygiene was undertaken the problem wou
114	mechanic or worked a supermarket checkout. No	proper	nurse to soothe our pain but at least
115	rs into the NHS, giving them proper rights and	proper	pay, and ensuring that we can all enjo
116	12 when London hasn't got hospitals to provide	proper	treatment even for minor injuries to o
117	s the country have admitted they cannot uphold	proper	standards of patient care because so m
118	o do the job properly. I really feel they need	proper	training and supervision.' Brian
119	ly in hospitals, are not actually based on any	proper	scientific evidence. For example, one
120	working with no vaccinations and little or no	proper	training. And nurses who stand b
121	ms to eradicate surface growths, but we need a	proper	scientific study to ensure that it wor
122	es in our hospitals. They will have to aim for	proper	standards of cleanliness or risk getti
123	is is happening in 2005. The obvious answer is	proper	training for cleaning wards, so why is
124	o somewhere else is an illusion. We need	proper	standards of hygiene in all hospitals,
125	or dismissal for a nurse who would not observe	proper	standards, such a threat would be "har
126	leave them absolutely buggered." Without	proper	statistics, there is no way of telling
127	ven the Prime Minister would now agree we need	proper	, old- fashioned matrons with absolute p

[i] 'Talking cleanliness in health and agriculture', funded by the ESRC, grant number xx.

[ii] The term 'keyword' is used in Entman's sense as mentioned above. Corpus linguists use a statistical definition of a 'keyword' (Scott 1999).

[iii] The co-occurrence of these adjectives with the words 'MRSA' and 'cleanliness' was first noticed in the corpus of the Guardian – the UK national broadsheet newspaper.

[iv] A set of concordance lines presents instances of a word or phrase usually in the centre, with words that come before and after it to the left and right.

[v] This technique is rarely explicitly discussed in the mainstream corpus linguistic approaches based on corpora of several million words that employ statistical lists and comparisons, as such studies are driven by the abundance and complexity of the data. In small-scale studies in which corpora do not amount even to the respectable figure of 1 million of words, statistical correlations are of little use. Therefore, many discourse analysts try to avoid such corpora that are too small to provide 'objective statistics' and too large for a detailed 'manual' discourse analysis.

[vi] The study began in August 2006 and this date was chosen as a cut off point for inclusion of media articles in the corpus.

[vii] 'Hygiene', 'cleanliness' and 'handwashing' are among the top 5 collocates for all three adjectives.

[viii] Hospital staff are also reported as blaming patients for 'bringing MRSA in', i.e. bringing MRSA from the community into hospitals (see concordances of 'blame' in Appendix 2.3).