Initial UK public reaction to avian influenza: Analysis of opinions posted on the BBC website

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In February 2007, avian influenza arrived in the UK. Following evidence of illness at a turkey farm in Suffolk, around 160,000 birds were slaughtered and poultry movement controls were imposed. Given past food crises (e.g. BSE), it was clearly important to predict UK public response: for example, was mass panic imminent, or would the public respond calmly? Unfortunately, there is currently no theory that enables accurate prediction of public response to novel hazards or to novel manifestations of old hazards (Hawkes and Rowe in press). Furthermore, the speed of the outbreak, and the lack of academic preparedness, undermined social scientists’ ability to acquire significant timely data on public perceptions in order to aid theory development or inform policy making. Analysis of initial public opinion is, however, possible, thanks to the recording of responses to open questions about this incident posted on the British Broadcasting Corporation’s (BBC) website. In this paper we: (a) justify the relevance and importance of this data, irrespective of deficiencies in its ‘representativeness’; (b) provide a content analysis of the more than 3,000 responses, and; (c) summarize initial opinion. Results suggest that ‘the public’s’ initial response largely comprised discontent in how government was managing matters and concern about current farming practices. Indeed, for many, past food scares served as a reference point for understanding the present crisis, providing lessons on issues such as industry greed and governmental/scientific incompetence and misinformation. It is, however, important to recognize that there are data limitations, which need validation through more controlled research processes.

Keywords: Risk perception; bird flu; avian influenza; risk communication

Introduction

The recent arrival in the UK of avian influenza H5N1 (also known as ‘bird flu’) was met with a vigorous government response, including the slaughter of around 160,000 birds and the imposition of controls on the movement of poultry. Aside from the physical threat to both wild and reared birds, there was real concern that bird flu might become infectious to humans, leading to severe consequences for public health. In the immediate term, however, the most likely negative consequences were liable to be psychological (i.e. the induction of fear/worry in the population) and economic (should public concern lead to the boycotting of poultry products). As such, perhaps the key question that needed to be asked was: what did the public think about the outbreak and was it likely to affect purchasing/consuming behaviour?

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The topic of ‘risk perception’ is one that has been much researched over the last 30–40 years. Such research has identified a number of factors that appear to be linked to perceptions of risk. For example, Slovic and colleagues (e.g. Slovic et al. 1980), in early research using the psychometric approach, showed that perceptions of risk are multi-dimensional, and that aspects such as hazard controllability and uncertainty play a role in determining whether something is perceived as particularly risky or not. Research specifically focused on food hazards has provided similar findings (e.g. Sparks and Shepherd 1994, Fife-Schaw and Rowe 1996). However, a number of objections to the psychometric approach have been raised from a critical sociological perspective (for an overview see Wilkinson 2001). These include the static or snapshot portrayal of individuals’ risk perceptions delivered by psychometric studies, a focus on researcher-selected risks and a neglect of the socio-demographic characteristics of respondents and of the social construction of ‘objective facts’ (Wilkinson 2001).

The psychometric approach has subsequently been extended by attention to social, cultural and affective factors (Slovic 2000, ch25). It has been found that certain demographic and socio-economic factors are related to quantitative (if not qualitative) differences in risk perception: For example, males tend to rate the risks associated with (various/most) hazards as lower than do females (e.g. see Slovic 2000). Other research has suggested that experts perceive risks differently to lay persons (e.g. Jensen et al. 2005; although there are methodological concerns with many ‘expert-lay’ studies, see Rowe and Wright 2001 and Sjöberg 2002 for discussions). Furthermore, the issue of trust has been highlighted as of great importance in risk perception (e.g. Siegrist 2000, Siegrist and Cvetkovich 2000, Slovic 2000, Frewer et al. 2003), with low trust in those responsible for managing and communicating risks being correlated to high risk perceptions. Indeed, the occurrence of various food safety incidents in the past (such as BSE and salmonella in eggs) has been associated with decreased public confidence in the safety of food and in the management of food-related hazards, in Europe and elsewhere (e.g. Frewer and Salter 2002), leading to calls for more transparent management processes, greater public involvement in policy making and even regulatory and institutional changes (e.g. Vos and Wendler 2006, Rowe 2007).

However, what is currently lacking in the risk perception research domain is a theory that would enable us to predict public response to novel hazards or novel manifestations of old hazards (e.g. Hawkes and Rowe in press). The nearest that the discipline has come to such a theory is perhaps the ‘public amplification of risk’ model (e.g. Kasprow et al. 1988, Kasprow 1992, Pidgeon et al. 2003), which identifies a wide number of factors related to whether risk perception may be amplified or attenuated. However, this model is not sufficiently well specified to allow prediction in any one case and, consequently, we cannot presently use it to predict how the public is likely to respond to events such as the bird flu crisis (see Wilkinson 2001 for commentary on potential limitations to the predictability of human responses). In any case, there is clearly a need to collect data on public reactions to recent events, not just for the purpose of academic research (potentially informing the future development of a risk perception theory), but also to inform policy makers and other stakeholders about likely public reaction so that appropriate responses (e.g. suitable risk communication) can be made. Problematically, the rapid progress of events has, to our knowledge, meant that the timely acquisition of data according to the most valid social research method (a survey with a sufficiently large representative sample) has not taken place. However, data on initial public opinion on the topic has been recorded, via the British Broadcasting Corporation’s (BBC) website (which solicited public response to the issue almost as soon as the initial
outbreak was reported) and it is an analysis of this data that forms the focus of this article.

In this paper, we address ‘public’ perceptions of the bird flu crisis. We begin by
describing the events surrounding the discovery in February 2007 of bird flu in the UK.
We next provide a discussion of data collection issues in order to justify our particular
methodological approach. We then report a content analysis of posts from over 3,000
responses to the BBC’s website, identifying the main themes from this data. Finally, we
discuss our results, first, from the perspective of what they say about public attitudes to the
危机, and second, from the perspective of what they reveal or suggest about our data
collection method. Implications for future research are then drawn.

Avian influenza arrives in the UK
H5N1, or avian influenza, came to the attention of scientists and the media in 1997 during
an outbreak in Hong Kong. In this outbreak, 18 people were infected, of whom six died.
All had had close contact with chickens. Since this time, a number of outbreaks have
occurred throughout the world, and by July 2007 there had been 318 confirmed cases of
bird flu (including over 100 cases in Indonesia), with a death toll of 192, and a mortality
rate among infected humans of approximately 60% (World Health Organization 2007).

The UK itself suffered a couple of incidents prior to the one addressed by this paper.
On 5 April 2006, a swan found in Cellardyke, Scotland, tested positive for H5N1, and in
April 2006, 36,000 chickens were killed in Norfolk after dead birds tested positive for the
H7 strain of bird flu. The incident of current concern first emerged on 1 February 2007,
when the State Veterinary Service (SVS) and the Department for Environment, Food and
Rural Affairs (DEFRA) were notified by the Bernard Matthews company about a possible
outbreak of avian flu at its turkey farm at Upper Holton, Suffolk.1 Preliminary tests on 2
February revealed H5N1 avian flu, and this was confirmed on 3 February, when DEFRA
introduced restrictions on the movement of poultry (a protection zone of 3 km radius and
a surveillance zone of 10 km radius). Over subsequent days, a wider restriction zone was
implemented, and a cull of 159,000 turkeys at the Holton farm was initiated by the SVS.
Initial investigations focused on infection transmitted by wild birds accessing the site,
although further investigations revealed similarities of the discovered virus to a strain of
the virus found in Hungary. It was subsequently revealed that Bernard Matthews had
plants in Hungary, and moved products between the Hungarian and UK sites, initiating
articles in the press about a potential cover-up, which embroiled a government minister.
Subsequent reports suggested a link to Hungary, but found no evidence of the import of
infected meat. During the incident, the FSA maintained its advice that properly cooked
poultry is safe to eat (FSA 2007a). On 12 March, all restrictions were lifted. Figure 1
provides a full chronology of the outbreak, while Figure 2 details the various actors
involved in the event.

In the next section, we consider methodological issues regarding the collection of data
on public perceptions. After this, we return to the bird flu issue and how we acquired
information in this case.

Public attitudes: Opinion polls, the web and the issue of representativeness
It is generally accepted that the best (most valid) way to acquire data on public attitudes is
via an opinion poll of adequate size (to obtain an acceptable level of precision of results)
and with an appropriately representative sample of the population. Such polls may be
conducted face-to-face, by post, phone or the Internet, each medium having its own data collection merits and demerits. Representativeness is the key concept here: the aim of such polls is to ensure that the sample obtained is free from any bias, i.e. that there is no reason to believe that those who are included in the poll are different from those who are not. Importantly, the characteristics that are controlled for are demographic and socio-economic, not psychological.

Acquiring ‘the public’s’ view at short notice is, however, problematic. Few academic organizations have the capacity to conduct a suitably rigorous poll: nowadays such research tends to be conducted by major market research organizations at the behest of academics or, more often, major political, industrial or consumer organizations. These exercises tend to be expensive and, indeed, financially and temporally impracticable in many situations in which rapid data collection is desirable. In the case of the recent avian influenza incident, for example, where understanding public opinions is important for a

<table>
<thead>
<tr>
<th>Date</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 February</td>
<td>Bernard Matthews notifies Department of Environment, Food and Rural Affairs (DEFRA) and State Veterinary Service (SVS) of possible outbreak of avian influenza at Upper Holton.</td>
</tr>
<tr>
<td>2 February</td>
<td>Preliminary tests reveal H5N1.</td>
</tr>
<tr>
<td>3 February</td>
<td>H5N1 confirmed. Restrictions placed on movement of poultry. Two risk factors identified: a gull and rook problem on premises, plus poultry processing plant on site. Cull of 159,000 turkeys initiated.</td>
</tr>
<tr>
<td>5 February</td>
<td>Turkey cull completed.</td>
</tr>
<tr>
<td>6 February</td>
<td>Movement of live poultry in protection and surveillance zones permitted under DEFRA licence. Epidemiological investigation of Upper Holton site; gulls observed on waste trimming bins; no evidence of wild birds having entered shed.</td>
</tr>
<tr>
<td>7 February</td>
<td>Rendering of carcasses from farm completed. Ban on hunting, shooting and scouring of birds in protection and surveillance zones.</td>
</tr>
<tr>
<td>8 February</td>
<td>Laboratory results suggest avian influenza strain identical to that recorded Hungarian outbreak. Bernard Matthews agrees to temporarily suspend movement of products between its Hungarian and UK plants.</td>
</tr>
<tr>
<td>9 February</td>
<td>Food Standards Agency (FSA) states it is investigating whether infected meat could have entered the food chain (BBC News 2007).</td>
</tr>
<tr>
<td>10 &amp; 11 February</td>
<td>FSA determines that consignments of cold meat in storage at Upper Holton and Chesterfield contain meat sourced from Hungary. Bernard Matthews agrees to withhold consignments from distribution. Press articles allege ‘cover up’ of Hungarian connection (Guardian 10 February, Observer and Sunday Times, 11 February).</td>
</tr>
<tr>
<td>13 February</td>
<td>Upper Holton processing plant restarts after disinfection process. Poultry brought in under special licence. Environment Secretary, David Miliband, publishes letter in press responding to allegations of a cover up (Guardian 13 February).</td>
</tr>
<tr>
<td>14 February</td>
<td>Hungarian veterinary authorities confirm that none of the meal in cold storage had been sourced from restricted area. Consignments released. FSA announces that Advisory Committee on the Microbiological Safety of Food (ACMSF) had concluded that recent developments did not alter its earlier risk assessment: the risk of acquiring bird flu through food chain was low and proper cooking will destroy any virus present in meat and eggs.</td>
</tr>
<tr>
<td>15 February</td>
<td>Joint report on possible transmission of H5N1 from imported turkey meat to the UK issued by FSA, Health Protection Agency (HPA), Meat Hygiene Service (MHS) and DEFRA. From evidence available, no product was received at Upper Holton premises during the risk period (January 2007) from turkeys that originated from with the Hungarian restricted zone. No evidence to justify a product recall.</td>
</tr>
<tr>
<td>1 March</td>
<td>Protection zone restrictions lifted.</td>
</tr>
<tr>
<td>12 March</td>
<td>All restrictions lifted.</td>
</tr>
</tbody>
</table>

Sources: DEFRA 2007; FSA 2007a, b, c

Figure 1. Chronology of events of the Upper Holton incident, 2007.
number of reasons, the questions arise: Who is to pay for such a poll?; who is to design it?; when is it to be implemented?; and who has the responsibility and the power to set such data collection in motion?

Irrespective of cost difficulties, the ‘representative opinion poll’ is not a perfect method. For a start, there is almost certainly a bias in terms of the personality or psychology of those who respond and those who do not. Some people (presumably, people with an opinion, and time to give it, and desire to be heard and perhaps faith that their views will be recorded and listened to and have influence) like to take part; but many others do not (the ambivalent/apathetic/cynical/time-limited?). It is difficult to see how this dilemma can be overcome and, indeed, there is little convincing research that successfully documents differences between typical opinion poll responders and non-responders (in terms of attitude, etc.), because non-responders naturally refuse to co-operate and ethical considerations prevent social scientists and marketers for compelling response. This problem not only arises for opinion polls, but also for formal referenda and voting in democracies, processes that are meant to deliver ‘representative government,’ but which in reality produce governments that only ‘represent’ those prepared to be counted. From this perspective, those who are prepared to be polled, and to volunteer their opinion, do have a special status, and are arguably worthy of special attention.

In modern society, the Internet provides a medium of rapid communication and an electronic archive of written and visual material. The development of the Internet has also allowed social researchers to redefine the ‘field’ in fieldwork. Internet-based approaches to data collection include web-based questionnaires, virtual interviews and online focus groups. In addition, the content of online discussion boards, newsgroups, self-help groups and bulletin boards offers researchers a potentially rich source of qualitative data, and there have been a number of studies that have used these data sets, particularly in the

<table>
<thead>
<tr>
<th>Advisory Committee on the Microbiological Safety of Food (ACMSF)</th>
<th>Statutory committee that provides expert advice to Government on questions relating to microbiological issues and food.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernard Matthews</td>
<td>Poultry company owning the Upper Holton facility that was the centre of the outbreak.</td>
</tr>
<tr>
<td>Department of Environment, Food and Rural Affairs (DEFRA)</td>
<td>Government department responsible for environmental and rural policy, promotion of food and drink industries, as well as health and welfare of livestock.</td>
</tr>
<tr>
<td>Food Standards Agency (FSA)</td>
<td>Independent government department set up by an Act of Parliament in 2000 to protect the public’s health and consumer interests in relation to food.</td>
</tr>
<tr>
<td>Health Protection Agency</td>
<td>A non-departmental public body responsible for protecting the health of the population in respect of infectious diseases, chemicals, poisons and radiation.</td>
</tr>
<tr>
<td>Meat Hygiene Service (MHS)</td>
<td>An executive agency of the Food Standards Agency. Responsible for provision of meat inspection services at all approved fresh meat premises.</td>
</tr>
</tbody>
</table>

Figure 2. Main organizations involved in the Upper Holton incident.
health field (see, for example, Cousineau et al. 2006, Im and Chee 2006). The accessibility of such data raises ethical considerations of whether the postings on an Internet community are ‘private’ or ‘public’ communications, for example, some users who register or log on to chat rooms or message boards may assume that their correspondence is confidential (Eysenbach and Till 2001). The BBC Have Your Say message board (the source of data in this paper) has strict rules, in line with the Data Protection Act, on safeguarding personal information (such as registration details), which it does not share with third parties. Nevertheless, some guidelines have been suggested for the conduct of on-line psychological research (Kraut et al. 2004) that state that research is exempt from the usual regulations protecting human subjects if ‘research involves the collection or study of existing data, documents, records…if these sources are publicly available or if the information is recorded by the investigator so that subjects cannot be identified.’

Though the data acquired from such sources lack academic rigour in the sense that respondents are unlikely to be nationally representative (their demographic and socio-economic details remain unknown), there are a number of important reasons not to dismiss it:

(1) Obtained responses are potentially the most immediate that are available on the topic of concern, reflecting respondents’ current attitudes rather than remembered opinions generated after the fact.
(2) These processes can potentially elicit a lot of data in comparison to other approaches (in this case, there were over 3,000 responses).
(3) Those responding, though perhaps more dynamic and web-literate than those answering opinion polls, might not be so different in the sense of being people who have an opinion and are prepared to provide it on request (i.e. they may be psychologically similar in some sense to typical survey respondents). This is an issue that needs addressing by research.
(4) It is possible that the public views on such a site may be taken into consideration by the media, such as the BBC, whether they are representative or not, and may thus inform the media as to whether there is a major story that needs to be reported.
(5) Even if the views are not representative, they do indicate the way in which some people think about, and frame, the topic of concern. As such, they are qualitatively interesting. The extent to which the views expressed in such circumstances are common needs to be established through more structured quantitative research methods.

Consequently, we believe the data acquired from such sources are important, in spite of their limitations, and that they have the potential to augment traditional data collection methods. That is, we are not suggesting that traditional methods are deeply flawed and need replacing, or that the novel method we describe shortly will solve all existing data collection problems, but rather that this novel approach might serve a useful role as part of a battery of approaches for assessing public opinion. In the next section, we detail the precise method of our data acquisition and analysis.

Method
The data used in this analysis comes from comments posted on the BBC Have Your Say message board between 9.30 a.m., 3 February 2007, and 9.45 a.m., 13 February 2007, immediately after announcement of the bird flu outbreak, and through the early period of
the crisis (before this was resolved, see Figure 1). We accessed and printed out the new comments once a day until the message board closed. In total 3,037 comments were included in this analysis.

Two different questions were posed during the duration of the message board. The first set of questions posed was:

Bird flu strain in Suffolk: Your reaction. What’s your reaction to cases of potentially deadly bird flu in Britain? Do you work at the poultry farm and how worried are you about this development? Are you a local farmer or do you live in the area? Will you still buy poultry? How have you been affected? Send your comments and experiences.

In total, 2,470 comments responded directly to these questions.

This set of questions was in place on the message board from 3 February 2007 until 9 February 2007. From 9 February 2007 until 13 February 2007, a different set of questions was posed:

Should all UK imports and exports of poultry products be halted? Will you still buy and eat poultry? Should there be tighter import controls on poultry products? Send your comments and experiences.

The change in questions reflects the developments in the news story over this period (see previous discussion of events in the UK during this period, and Figure 1). In total, 567 comments responded directly to these questions.

The message board was fully moderated, which means that someone in the BBC Have Your Say team reads the messages prior to publication and either accepts the post or not. To publish more comments at a greater speed, they do not edit grammar or spelling. According to Vicky Taylor, head of BBC Interactivity and the Have Your Say message boards, in fully moderated debates as many comments as possible are published, regardless of viewpoint, in the time available. However, the Have Your Say boards can receive up to 10,000 emails per day, or more, if there is a particularly important or controversial news story (Rosenbaum 2006, Taylor 2006).

The Have Your Say boards try to publish comments from as many different people as possible and contributors are encouraged not make multiple postings or to repost the same or very similar messages (BBC 2008). That being said, there is some evidence that certain individuals did make multiple postings. The researchers did not, of course, have access to the full personal details of respondents, but an examination of the names and addresses attached to each posted message allows for an estimate of the number of multiple postings. It appears that 286 individuals posted more than one message; the majority of these (65%) posted two messages, although two individuals made 16 and 19 postings respectively. In addition, 31 messages were ‘anonymous,’ so it was not possible to ascertain whether or not these represented multiple postings by the same individuals. If the additional messages from the multiple contributors are discounted, together with the anonymous messages (where we are unsure of how many individuals there are), this still represents a total of 2,500 individuals contributing to the message board.

It is possible that some respondents may have registered multiple times to the message board. However, we feel this is unlikely for a number of reasons. First, the message board was concerned with qualitative responses, not quantitative (i.e. there was no ‘vote’). Second, registering multiple times is time consuming and, in any case, we found no evidence of repeated arguments from ‘different’ people. Finally, the topic was not one
likely to induce fraudulent behaviour, i.e. nothing rested upon the quantity or quality of people's expressed opinions.

We acknowledge that we are unable to ascertain sample bias. What we can say is that the responses were to a BBC web site and not to a specialist interest group web site. As such, we might suppose that it would have been accessed by a reasonably unpartisan section of the national population, while recognising a possible bias for higher computer literacy and higher educational status than average. This question is obviously worthy of research focus in its own right. It could also be argued that the number of respondents is large enough to merit attention even if they do comprise a highly biased constituency.

Initially, three researchers considered the first 100 responses and independently coded these for key themes. The researchers then met to compare their assessments and produce an agreed list of codes. While we acknowledge the role of the researchers' background knowledge in the coding of the data, our units of analysis were relatively brief responses to open questions, rather than complex pieces of text (e.g. interview or focus group transcripts). As such, the content of the messages was often straightforward. Nevertheless in order to check for reliability over the entire data set, two members of the research team coded each response according to the initial code list (with multiple codes possible for any one response). During this time there were a number of informal discussions between the coders about unusual responses that did not appear to fit into the coding scheme, and these discussions led to a number of new codes being produced, along with the revision in definition and emphasis of some of the original codes. At the end of this process, the two coding lists were compared to ascertain the degree of agreement. The level of analysis was at that of ‘super themes,’ clusters of codes representing sentiments on a broad theme, which may have included a number of sub-themes dealing with more specific matters. We were interested in themes that addressed attitudes only: we were less interested in posts that either featured humorous remarks, provided information, or made a particular recommendation (without giving any hint of why that recommendation was being made, and/or which simply stated a recommendation on the basis of a coherent and reasoned argument without value expressions). We return to these other responses, for the sake of completeness, after our primary analysis of revealed attitudes.

Of the 3,037 entries, there was full agreement on a total of 67% by code and 61% by comment. For entries on which there was disagreement, the two original coders met to discuss these until agreement was reached about appropriate coding. In the Results section, we discuss the key themes that emerged, with illustrative quotes, from the most common theme to the least (of those themes that were coded). We start with an overview of the frequency of the different codes.

**Results**

Five main themes (which included within them a number of sub-themes that considered various aspects of these issues) emerged from the analysis: Official Blame, Here We Go Again, Anti-industrial, Information Inadequacy and Jingoism. The more minor themes included: ‘confidence,’ ‘pro-industrial’ and ‘foreign isn’t bad.’ A large number of posts were coded under the ‘other issues’ theme, but as this theme is less to do with expressed attitudes it does not feature centrally in the analysis. Table 1 summarizes the theme and sub-theme coding structure and gives some indication of the frequency with which the themes occurred. Note that the numbers add up to over 3,000 as posts could be given more than one code, and a total of nearly 5,000 codes were assigned. The numbers should only be taken as broadly reflecting the prominence of issues within this particular sample, and
Table 1. The main themes identified, including number of posts and percentage of codes assigned.

<table>
<thead>
<tr>
<th>Codes</th>
<th>N</th>
<th>% of total codes assigned</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Official Blame</strong></td>
<td>1010</td>
<td>21</td>
</tr>
<tr>
<td>• Negative government</td>
<td>393</td>
<td></td>
</tr>
<tr>
<td>• Negative government (handling)</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>• Negative government (vested interests)</td>
<td>143</td>
<td></td>
</tr>
<tr>
<td>• Negative scientists</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>• Misled</td>
<td>334</td>
<td></td>
</tr>
<tr>
<td><strong>Here We Go Again</strong></td>
<td>971</td>
<td>20</td>
</tr>
<tr>
<td>• Hype</td>
<td>694</td>
<td></td>
</tr>
<tr>
<td>• Reference</td>
<td>277</td>
<td></td>
</tr>
<tr>
<td><strong>Anti-industrial</strong></td>
<td>918</td>
<td>19</td>
</tr>
<tr>
<td>• Intensive food production</td>
<td>406</td>
<td></td>
</tr>
<tr>
<td>• Bernard Matthews</td>
<td>191</td>
<td></td>
</tr>
<tr>
<td>• Market forces (vested interests)</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>• Market forces (consumers as agents)</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>• Food miles</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>• Vegetarianism</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>• Twitchers</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td><strong>Info inadequacy</strong></td>
<td>522</td>
<td>11</td>
</tr>
<tr>
<td>• Uncertainty</td>
<td>421</td>
<td></td>
</tr>
<tr>
<td>• Negative government (advice)</td>
<td>101</td>
<td></td>
</tr>
<tr>
<td><strong>Jingoism</strong></td>
<td>237</td>
<td>5</td>
</tr>
<tr>
<td>• Foreign</td>
<td>204</td>
<td></td>
</tr>
<tr>
<td>• Foreign (EU)</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>• Negative government (EU)</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td><strong>Confidence</strong></td>
<td>177</td>
<td>4</td>
</tr>
<tr>
<td>• Confidence</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>• Positive scientists</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Pro-industrial</strong></td>
<td>57</td>
<td>1</td>
</tr>
<tr>
<td>• Pro farm</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>• Anti-vegetarianism</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td><strong>Foreign isn’t bad (no ban)</strong></td>
<td>42</td>
<td>1</td>
</tr>
<tr>
<td><strong>Other issues</strong></td>
<td>915</td>
<td>19</td>
</tr>
<tr>
<td>• Information</td>
<td>233</td>
<td></td>
</tr>
<tr>
<td>• Humour</td>
<td>388</td>
<td></td>
</tr>
<tr>
<td>• Recommendation</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>• Miscellaneous</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>4849</td>
<td></td>
</tr>
</tbody>
</table>

not taken as indicative of how a nationally representative sample would rate issue importance.

**Main themes**

**Official Blame**

Condemnation of the Government and its various agencies (e.g. DEFRA) was one of the main themes to emerge, with 1,010 posts coded under this theme. Some respondents appeared to use the Holton incident as an opportunity to attack the present government at a general level. However, there were also concerns about handling of this specific issue, including apparently inappropriate actions, government inactivity due to vested interests (i.e. not wanting to upset the modern farming industry) and a feeling that the public were not being told the ‘full story’ or indeed were being misled about the incident.
In general negative comments about the government, reference was made to its perceived untrustworthiness and incompetence, as well as to its policies in relation to taxation levels and the NHS. The state of the NHS was a cause for concern given the demands that would be placed on it during any potential flu pandemic.

I wasn’t worried until the Gov told me not to worry, we all know just how honest and trustworthy that bunch is [R761]

Whatever the cause of the flu, no doubt we can rely on Gordon Brown to tax it. Bring on the ‘chicken tax’ [R1314]

Negative government handling formed a major sub-theme of Official Blame. Comments were concerned with perceived inefficiency in determining the cause of the disease outbreak, including the debate over whether wild birds were the vector for transmission and the ‘delay’ in acknowledging the link with Hungary.

If wild birds were the vectors, where are the dead ones? Saying that wild birds carried the virus is just supposition without evidence [R1342]

It’s all very well the government saying don’t panic, but they can’t even trace the source [R1588]

The strain of H5N1 is reported as being identical to that in Hungary; Bernard Matthews has another turkey plant in Hungary; so why aren’t DEFRA eliminating this connection? [R1313]

The transportation of culled birds for incineration was regarded as a highly inappropriate action, because of the perceived danger of spreading the infection outside of the protection and surveillance zones. There were also many references to the fact that the trucks used to transport the carcasses were not hermetically sealed (as had been suggested by an ‘expert’).

So now they reckon it was cross contamination after all. In which case, DEFRA’s decision to transport the infected carcasses halfway across the country was utter madness [R686]

So obviously the DEFRA gurus deemed that the tarpaulin covers thrown across the loads were an effective bio-hazard screen [R1389]

References were made to press reports of activities within the protection and exclusion zones that were apparently in breach of risk management actions (such as poultry not being moved inside, but also including the large media presence in the area) and this gave rise to comments about the need to enforce precautionary measures.

Perhaps more pro-active work and DEFRA taking more control may prevent these problems protracting [R786]

Some respondents questioned the government’s preparedness for dealing with a human flu pandemic, raising concerns about the ability of the NHS to cope with the situation (due to mismanagement by the government) and about the availability of anti-viral drugs (likely to be sufficient for only the ‘chosen few’).

Comments coded under negative government-vested interests were concerned with the perceived tendency of government to give the interests of the farming industry a higher
priority than consumer health protection. In some cases this was linked to the ‘Cash for Honours’ enquiry which was taking place at the time of the bird flu outbreak.

I am absolutely horrified that yet another possible DEFRA cover up has been attempted on behalf of the farming/food industry [R647]

Who nominated Bernard Matthews for a knighthood, was it Mr Blair by any chance. The conditions those poor birds are kept in is absolutely appalling just so people can make a lot of money [R2721]

Feelings of being misled formed another main strand of the Official Blame theme. Comments under this heading took a number of forms. There were some respondents who felt that the bird flu incident was being used to deflect the public’s attention from other more important parliamentary issues (such as the war in Iraq and the ‘cash for honours’ questions), while others felt that the public were not being told the ‘truth’ about the likely causes of the incident.

Well this has taken the interest away from Mr Blair in the media. Remember the prison crisis, cash for honours? They think we have forgotten? But some of us have not!!!!! [R887]

So much for the claim that dead birds posed little or no risk. For goodness sake stop lying to us! [R666]

It is not so much what we are told that is worrying, but more to the point is what we are not being told [R967]

The code negative science embraces comments that make reference to the views and opinions of ‘so-called experts,’ citing examples of where they have been proved wrong in the past or giving reasons why their advice and recommendations are not to be relied upon.

All this goes to show is that you can’t trust ‘experts.’ No matter what subject they pontificate on—bird flu, SARS, AIDS, BSE/CJD and, er, Global Warming—time shows they never ever get it right [R602]

It really annoys me when I hear all these experts, scientists and doctors (who are all probably on the government’s payroll anyway) try and make out that everything is under control, and that if we cook turkeys and chickens properly, they are all perfectly safe to eat! [R1327]

**Here We Go Again**

The Here We Go Again theme includes the codes Reference (277 posts) and Hype (694 posts). For many respondents, the bird flu issue could be understood in the light of past food scares, the most common analogy being to the BSE crisis, but with the Foot and Mouth crisis also being commonly mentioned. Interestingly, these incidences were mainly perceived to be similar to that of bird flu, either because they all had/have their roots in unsavoury modern farming practices (i.e. raised in relation to Anti-industrial comments), or because the past and present incidences show European/foreign hypocrisy, with foreigners happy to ban British beef, but somehow preventing Britain from now banning foreign poultry imports (i.e. mentioned in a jingoistic context). There was also evidence
that respondents felt that the authorities had not learnt their lessons from these previous
scares and were repeating past mistakes.

How is H5N1 passed from infected bird carcasses to healthy birds? Most probably by adding
ground up carcasses to the bird feed. [...] BSE all over again [R727]

What scares me isn’t the avian flu [...] it’s that we’re being reassured and given ‘expert advice’
from the same organizations who totally messed up the BSE issue [R787]

I am horrified that they trucked the dead birds 200 miles to be incinerated [...] I certainly
don’t want a repeat of the ‘foot and mouth’ episode where they blanket culled healthy
animals as well as those infected. It seems DEFRA hasn’t learned from past experiences!
[R714]

Does the government never learn anything from its past mistakes? After its disastrous
handling of BSE and foot & mouth outbreaks, it has already badly and dangerously handled
this latest bird flu outbreak. Waiting for several days before announcing it, sending thousands
of infected birds to Staffordshire [R803]

In addition, there were comments that made reference to the plethora of ‘scares’ that
people have to concern themselves with, highlighting the fact that dire predictions of
catastrophe have previously proven ill founded. Other respondents sought to put the risk
of bird flu in perspective by making risk comparisons, for example, with the issue of road
traffic accidents (where the casualty rate is higher, but which is much less discussed in the
media). Respondents also pointed to the lack of fatalities worldwide and the lack of any
evidence of human infection in the UK.

Tomorrow I may die of bird flu, tomorrow I may die of global warming, tomorrow I may die
of terrorism, tomorrow I may die from passive smoking. Shouldn’t the whole of the UK have
died yesterday from CJD anyway? [R937]

...and exactly how many people have died of bird flu? Anywhere? [R1351]

The drive to the supermarket is far more dangerous than any risk from eating the food you
buy from there [R994]

For a large number of respondents the bird flu incident was just another example of
media hype and demonstrated the way in which the media amplifies a ‘non-issue.’ There
were numerous comments about the extent of the media coverage, especially with regards
its sensationalist and scaremongering nature. It was felt that this was done in order to
generate sales or fill an otherwise slow news period. Many respondents felt that there must
be other more worthwhile stories to report and that the public was becoming bored with
constant ‘scares.’

I wish the press would just feed us with the facts of this issue, and also do it in such a way that
we know exactly where we stand. The hype surrounding this and other issues is to often just to
sell newspapers rather than inform society. On matters such as this the press should be
regulated [R1355]

We don’t need immunity to disease [...] what we REALLY need is immunity to Media Scare
Stories [R1396]

Scare stories on many issues have left the public unable to assess risk [R1422]

Bird flu? I think we should be more worried about the outbreak of ‘hysteria,’ immensely
contagious, you can catch it from newspapers and online [R1895]
Some respondents also made reference to non-food ‘scares.’ In certain cases (e.g. SARS) this was done to illustrate the way in which issues are hyped, but in other instances (e.g. the 1918 flu pandemic) these references were used to indicate that there was cause for concern (see Information Inadequacy).

Anyone remember SARS? . . . the last media hype ‘pandemic’ that never happened [R2407]

Should we be worried about it? Well, considering Mother Nature throws a pandemic our way every 100 years or so to keep our pathetic little race in check, and considering last time She done it was during the First World War, then aye, I think we should be. WHO are. But then again, ignorance is bliss [R779]

Anti-industrial

A theme that was also common (with 918 posts) has been labelled Anti-industrial. For many respondents, the bird flu problem was seen as a consequence of modern farming and processing methods, and indeed modern society more generally. For most of these, the target of concern was factory farming and the ill-treatment of animals, with a strong ethical element, which for some provided justification for vegetarianism. Factory farming (such as that conducted at the Holton plant) was typified as providing ideal conditions for breeding problems like bird flu, with analogies often made to past scares like Foot and Mouth and BSE (seen to have similar industrial causes). Other links were made with a profit-over-safety motive (see discussion of vested interests), and also included within this theme were condemnations of the relevant producer (Bernard Mathews), which was essentially held up as an archetype of all that is wrong with modern industrial processes and the drive for profits. Another aspect to this theme was a love of nature and this was exemplified by people who did not like the way wild birds were apparently being blamed by the authorities for the outbreak and spread of bird flu: for these respondents modern farming methods were to blame.

Intensive food production (IFP) formed a major sub-theme within the Anti-industrial theme. The negative comments were not confined to just farming but also often involved criticism of supermarkets as well. This sub-theme was often associated with the condemnation of present methods and concern to promote organic methods instead, with the terms ‘organic’ and ‘local’ often used together.

More to the point, what the hell are we doing eating processed meat at all? Fresh meat has its source labelled, buy local to be safe. With processed meat, you have no idea where it comes from, flavouring hides its age and it has the texture and taste of wet cardboard. Learn to cook! It’s cheaper, healthier, tastes immeasurably better, and can be almost as quick. Put food processors out of business [R587]

These comments suggest a strong feeling that bird flu (and other food scares or incidents in the past) are the price that has to be paid for rearing animals in ‘unnatural’ conditions.

The turkeys are kept in appalling conditions and most are not killed cleanly. No wonder disease is rife in these sheds [R574]

Some comments also reflect the feeling that profits are being put ahead of food safety by farmers and food producers.
For ‘Contaminated meat from Hungary’ read the food that the turkeys were being fed on. Think about it, they are feeding poultry by products from Hungary to the Suffolk turkeys to increase profit margins. Just as happened with cattle being fed processed beef products and resulting in the BSE outbreak [R607]

Another sub-theme, although not as common as the IFP sub-theme, was labelled Bernard Matthews. Within this, people placed specific blame for the outbreak on Bernard Matthews and his farms, with condemnation stemming from both an animal welfare point of view, as well as from a feeling that the company had put profit before safety. For many of these respondents, it is clear that they had general concerns about modern farming practices, and that Bernard Matthews was essentially an archetype or symbol of the wider problem.

Really fed up with Bernard Matthews. First their unhealthy twister, then cruelty by their unsupervised staff playing base ball with live turkeys, and now this absolute scandal [R616]

Why ship part-processed turkey from Hungary to Norfolk? Could it be to rear it cheap in Hungary but then ‘add value’ by packing in UK so it can be marketed as Bernard Matthews Norfolk Turkey? Or am I too much of a cynic? [R691]

Another important sub-theme to emerge was the issue of vested interests. Generally, industry was seen as more concerned about profits than safety. Often, this industry greed was associated with the import of cheap (and inferior) foreign produce, though many also condemned modern intensive farming practices.

As usual, profit for megabusiness comes before both human safety and animal welfare [R789]

Conversely, many respondents saw the consumer as having some responsibility or blame in this issue, pointing out that industry produces cheap food (a correlate with infected produce) because this is what consumers want.

This is what happens when consumers want cheap meat. Maybe if more people went to butchers or bought organic meat and didn’t buy processed meat, or meat from the supermarket, then we wouldn’t have these problems. It’s our own fault for wanting everything cheaply, this has come back to bite us, what next? [R263]

As such, consumers only have themselves to blame for this problem, and some respondents actively called for consumers to mend their ways, advocating that we support quality local produce (e.g. organic).

Cheap ready meals based on poultry are an absolute obsession in the UK at the moment. Anyone complaining about mass production of poultry should think very carefully before picking up a ready meal in their local supermarket [R1989]

Another issue of discontent with modern practices, although with a smaller number of posts, brought in environmental matters and concerned Food miles.

Like foot and mouth this crisis has highlighted the ridiculous international trade in meat…Surely the lesson is that it is in everyone’s interests—humans and animals alike, and the environment—to shorten the food chain. Many of these problems would be avoided if meat was slaughtered and sold near to where it was reared. Of course, it would probably be a bit dearer [R675]

One interesting minor sub-theme within the general Anti-industrial theme was labelled vegetarianism. The present incident was used by some to point out their moral superiority due to not eating meat. The bird flu outbreak, and in many cases the perceived
cruelty associated with modern farming methods, were seen as the just desserts of meat eaters.

Haha that will teach all you meat eaters that is what you get for keeping animals in cruel dirty factory farm conditions. It’s almost like the(y) are getting their own back and I don’t blame them [R999]

Another minor sub-theme was the code named Twitchers. Respondents here expressed concern that wild birds were being blamed for the outbreak when in fact the real culprit was mankind and modern farming methods.

Once again, wildlife will ultimately pay the price for what are clearly man’s mistakes, we can replenish the domestic bird stock, but it will probably mean EXTINCTION for many wild bird species, and just as we thought it couldn’t get any worse . . . and will inevitably lead to the total destruction of all wildlife across the planet unless drastic action is taken RIGHT NOW [R857]

Information Inadequacy

The role of information, or disinformation, was important for many (522 posts). The sub-themes within this category are uncertainty and negative government advice. Many respondents saw the current issue as confusing and a perceived lack of information (or shortcomings in available information) led many to feel uncertain and to ask questions, or to offer speculations as to the nature or the origins of the current outbreak of bird flu. For many consumers, there was implicit uncertainty and worry in their responses, which were expressed as posted questions. A common discussion point was the government recommendations that cooked poultry is safe, which didn’t deal with the issue of how risky is the food before it is cooked, as well as concern about uncooked scraps and waste.

If an infected bird lays an egg, is it possible to contract bird flu from handling the egg, or consuming such an egg that is not properly cooked? My reaction—switching from free range to barn eggs, at least until this question is answered. People inadvertently eat insufficiently cooked poultry products all the time, how is there . . . zero infection risk with consumption? [R1258]

Others also felt that there were many questions which remained unanswered, but they more directly attributed blame to the government for failing to provide the public with proper, clear information about the current outbreak. There was the sense that government information was contradictory or incomplete. A number of respondents who kept poultry themselves questioned DEFRA’s advice that the birds needed to be brought indoors (especially as the outbreak was in a biosecure unit) and pointed to their own experience in maintaining the health of their birds. Others pointed to a lack of information for private bird keepers, while some respondents also took issue with the way that information was distributed, pointing to the fact that not everyone has access to computer facilities.

We were told that turkey meat presented no risk as the virus dies with the host. In that case why are the government now saying the most likely source is infected turkey product? [R111] There hasn’t really been much said anywhere for private keepers which is disappointing [R1503]
A number of respondents took issue with other posters on the message board for failing to take the situation seriously or for dismissing it as ‘hype.’ In these cases there was frequent reference to the 1918 flu pandemic as evidence of the need to be concerned about the possible mutation of the virus, often coupled with reference to the lack of preparedness for such an eventuality and questions as to what self-protection measures might be necessary.

Do we just continue our lives as normal or do we need to take certain precautions? [R28]

**Jingoism**

The *Jingoism* theme (237 posts) was particularly common in responses to the second set of questions on the HYS message board that ran from 9–13 February, though it did not feature so predominantly in the comments posted between 3–9 February that focused on the bird flu outbreak more generally. Respondents using the *Jingoism* theme generally expressed either pro-British or anti-foreign sentiments. In answer to the message board question about whether imports/exports should be halted, many respondents asserted that imports should be banned (note: where respondents simply made a statement about banning imports, without value expressions, these were coded as *recommendations* alone).

A key reason given for this was foreign (and often EU) hypocrisy, often discussed with reference to past food incidents, particularly BSE. Thus, for many respondents, here was a case where Britain would not, or could not, ban imports from infected areas (Hungary), in contrast to either past or likely bans on British exports by our partners should the situation be reversed. There was also a general negative feeling towards the EU and also towards the British government for obeying EU rules rather than protecting the interests and health of British citizens.

The ‘we can’t protect our health because the EU won’t let us’ statement is proof if ever it was needed that we should LEAVE the EU now. The French, Germans etc. were quite happy to ban our beef against the rules [R17]

Often, food from other countries was denigrated as being cheap, or in some way inferior, produced to less stringent standards and with fewer adequate controls.

[...] And we think we are ‘buying British’ but it often is from countries with a poor record of animal husbandry, despaching the beasts and the use of hormones/antibiotics. I even read that chicken and turkey meat is heavily chlorinated upon arrival due to the poor hygiene standards in other countries. I am amazed that we have not all been poisoned before now! [R64]

Sometimes, the anti-foreign sentiments went further, and the issue of immigration was also raised.

It’s funny how easy it is for the government to talk about banning imports of poultry from EU but when the discussion turns to mass immigration from the EU they are suddenly powerless an(d) unable to do anything about the huge influx...[R173]

On the flip side, many respondents wished to see imports banned for pro-British as opposed to anti-foreign reasons (though the two sides to this arguments were often related). Such respondents often wondered why we needed imports at all, and suggested Britain needed to become more self-sufficient.
Imported meat brought us foot and mouth in 2001 and now it has brought in a dangerous strain of bird 'flu. Buy British and stay healthy and help our farmers and shops as well [R249]

More widely, banning imports was seen by some as a chance to save British farming (and to act as a model for other industries), or to pre-empt a demise that has afflicted other British industries.

Banning foreign imports would help our own industry. Come to think of it, the idea is quite a good one for a lot of different industry sectors! [R43]

Minor themes
There were a number of (relatively) minor themes that we will only deal with briefly due to space limitations. These generally reflected the flip side of attitudes encoded in the major themes, but received far less support.

Confidence
A minority of postings expressed confidence in the handling of the incident and demonstrated a positive attitude towards science and ‘experts.’ For these respondents the authorities had taken all the action possible and had provided sufficient information to consumers and to those more directly affected by the incident.

As the inevitable has occurred and the authorities have taken all effective action asap, let’s congratulate them [R805]

It seems the Government and the Civil Servants can do no right here. They have managed, with Bernard Matthews help, to contain an H5N1 outbreak quickly and efficiently only for people to still find something to moan about [R989]

They have found the virus, they are dealing with it, end of story [R1918]

Pro-industrial
A small number of respondents were defensive about current farming/production methods. Respondents suggested that current intensive methods are blameless as the problem was due instead to wild birds and that outbreaks had occurred in Asia where there are small backyard flocks and people living in close proximity to their birds. In contrast, these respondents praised the bio-security arrangements of the large-scale farms and indicated that such methods in fact helped to contain the outbreak more easily. There was some concern that the current crisis was unjustly going to ruin farmers/producers. In addition, the defence sometimes related to marketing issues: producers should not be blamed, as they are simply providing the products that consumers want and can afford.

So battery farm conditions somehow caused this outbreak then? […] What nonsense. The virus came from outside. What’s more, this style of farming actually helped contain the outbreak [R889]

It did not start at modern, well managed and efficient units like those run by Matthews. Do we want cheap, plentiful food in this country or not? [R1947]

There were also small number of respondents who felt that cheap food served a purpose and that some people were not able to afford organic or local food. They felt that
producers such as Bernard Matthews were not to blame as they provided the consumer with cheap food which for some was a necessity.

Whether we like it or not this country relies on people such as Bernard Matthews (and Tescos that other subject of derision [...] ) to deliver food to our tables. We are not all able to afford an ‘organic, Guardian reading, free range’ lifestyle out here in the real world. Let’s face it—we are hypocrites! [R1947]

Foreign isn’t bad

Opposite sentiments to those expressed within the Jingoism theme were far fewer, but did exist. These focused on the issue of banning imports, but came to a different conclusion, in some cases suggesting that imports are not substandard and may even be better than some British products.

There should be no ban on foreign poultry. Much of what is imported and sold here is cheap yet high quality. If we have to rely on home-produced birds, prices will soar to meet demand and quality will go downhill. Much the same could be said for other food products. British farm produce is not what it was 30 years ago! [R168]

These respondents evinced some cynicism against the ‘ban imports’ arguments, generally pointing out that this was hypocritical (we should maybe leave this to foreigners), or that this might lead to reciprocal bans and might have an effect on the British economy and farming industry.

The problem is, if you ban foreign imports then they will ban meat from the UK for the same reason. That will have a devastating effect on British farmers who export millions each year. That was evident with the BSE scare when France banned our products [...] [R326]

Other issues

The postings that were categorized under other include humorous comments, those that were deemed to provide information or to make recommendations about the handling of the incident, as well as miscellaneous remarks. The use of humour was in considerable evidence in responses. Some respondents provided factual contributions to the debate, in terms of bits of knowledge or information that other respondents might not have known about. Many postings made recommendations about possible courses of action for the government, both in terms of questions that should be asked in the search for likely causes of the disease, plus risk management measures that should be taken and, perhaps, by implication, were not being taken. Space issues prevent us discussing these details further.

Discussion

In this paper we have examined the content of over 3,000 posted responses on the BBC Have Your Say message board in relation to the February 2007 bird flu outbreak at Upper Holton in Suffolk. We were interested in this data as a means of acquiring a timely indication of public perceptions about bird flu and the government’s handling of the incident. While questions can be asked about the ‘representativeness’ of this data, it nevertheless provides a snapshot of the opinions of a large number of members of the public at the time the authorities were in the process of dealing with the outbreak.
Furthermore, although we cannot conclude that the views expressed on the message board were nationally typical, it is clear that most exhibited significant concerns, and there is some evidence that public concern did impact on consumer purchasing behaviour. Thus, Bernard Matthews reported a 40% drop in sales of its turkey products at the end of February (foodproductiondaily.com 2007), and data from the market research company AC Nielsen suggests that sales of fresh turkey were down by 29% for the 12 week period to 29 April 2007, while frozen turkey sales were down by 33% when compared to the same period the previous year (kamcity.com 2007). Consumers switched to chicken, other meat and fish as alternatives to turkey.

Official Blame and Here We Go Again were identified as the two most common themes running through the comments. It should be noted that the government was particularly unpopular at this time, buffeted by speculation about the departure date of Prime Minister Tony Blair and the deepening of the Cash for Honours investigation. Many respondents thus felt that the outbreak of bird flu was not a ‘coincidence,’ and may have been given more prominence to get the government out of a difficult situation. It might therefore be suggested that the feelings of negativity about the way the government handled the outbreak were an expression of dissatisfaction with the government in more general terms. A similar phenomenon, it is claimed, can be identified in relation to BSE in the run up to the general election of 1997 (Packer 2006).

The BSE case provided a ‘useful peg’ on which to hang complaints based on a wider and more general dissatisfaction with the long-running Conservative government. Furthermore, the generally negative view of government held by concerned respondents appears to highlight the link of trust with perceptions of risk that has been established by past research (e.g. see Slovic 2000). In this case, considerable distrust was evinced by many respondents about many of the key actors in this issue, about the government (in terms of trust in managing the issue and trust in providing the public with unbiased information), industry, scientists, the media and even the EU. Such distrust was clearly interwoven with perceived vested interests, with the government perceived to be prioritising either industry or foreign commitments at the expense of public health (a perception found in other studies, e.g. Van Kleef et al. 2006).

The Here We Go Again theme highlights some interesting issues. First, there was a widespread cynicism about the media: A feeling that they were hyping the story ‘as usual’ rather than providing people with factual information. Indeed, the ‘hysteria’ generated by the media was regarded by some as more serious than many of the reported ‘scare.’ Second, the widespread use of ‘references’ to past food scares (and other health alarms) clearly showed how people anchor current risks to past events, in an attempt to predict how a new risk will pan out, though different people chose different anchors or made different interpretations from the same anchor (e.g. BSE as an example of government incompetence, or as an example of an over-hyped media issue). A new threat therefore appears to be placed within the context of something known and familiar, and hence, we see echoes of how the government handled past food scares and this becomes shorthand for many other issues: Evidence of government incompetence, media hype, lessons not being learned, corruption and cover-up, and people not taking the issue seriously.

This accords with work by other researchers. Hunt and Frewer (2001) describe how BSE impacted on attitudes to GM food, while Joffe and Lee (2004), in a study of the social representation of the 2001 Hong Kong avian flu epidemic from the perspective of local women, found that respondents’ first thoughts about the epidemic were related to its causes and to anchors (which past food scares it was similar to), as well as to the emotions and images it evoked. Thus, Mairal (2003) points to inter-activity of risk
events, whereby new cases are related to previous cases. This inter-dependence of different risk situations that people have either experienced directly or heard of through the media has a number of implications for risk managers: Official risk mitigating solutions are considered to be ‘opaque, deceitful, inefficient or incompetent’ and there is an intense mistrust of information provided by the authorities (Mairal 2003). Government action during the bird flu incident was viewed through the lens of previous cases, for instance the belief that the government had mismanaged foot and mouth (either by not doing enough or by needlessly slaughtering healthy animals) and so was likely to mishandle this case.

Indeed, the media also often seek to anchor current events to historically well-established images (Nerlich and Halliday 2007). In their study of the coverage of avian influenza in UK newspapers and scientific journals between 2000 and 2005, Nerlich and Halliday (2007) point to the use of the 1918 pandemic as an ‘alarmist anchor.’ In this study, the 1918 flu pandemic was used by a number of respondents to indicate that the outbreak should be taken seriously and not dismissed as ‘hype’ (as many of the posters on the HYS message board appeared to be doing). Some of these respondents acknowledged media reporting about the 1918 outbreak. With regard to media ‘hype’ about various food ‘scares,’ Nerlich and Halliday (2007) have suggested that too many early warnings might lead to cynicism and disengagement. However, they also point out that the media itself may not be entirely to blame: Research communities, scientists, and government officials can all be crucial participants in the production of awareness, fear and attribution of blame. The media reporting of food hazards is the result of a complex process of interactions between the media, the social institutions on which they report and the public (Reilly and Miller 1997). It would be interesting to also consider, in future research, to what extent the media reacts to the kind of data that emerges from message boards such as the one analysed in this paper.

Other typical findings from the risk research literature appear supported by the comments of respondents. Arguably, the relationship of both ‘dread’ and ‘uncertainty’ to risk perception, revealed in past psychometric studies (e.g. Slovic et al. 1980, Fife-Schaw and Rowe 1996) was evident. The dread of another 1918 pandemic was a clear source of concern for some, while the prominent Information Inadequacy theme revealed the importance of uncertainty for the risk perceptions of many. However, one particularly interesting factor in the risk perception literature that is less commonly reported, but which emerged here through the Anti-industrial theme, is the natural-unnatural risk perception dimension. That is, a number of past studies appear to suggest that unnatural (or technological) risks may be regarded as more threatening than natural ones (e.g. Fife-Schaw and Rowe 1996, Sjöberg 2000). Many respondents in this study expressed concern about modern methods of food production and this focused in particular on their unnaturalness in contrast to the perceived naturalness of organic or local food. As was the case in much media reporting of the BSE case (Washer 2006), there is the feeling that modern methods of food production have somehow gone too far and are actually causing food safety problems. The spectre of BSE is present in many of the comments, with many references to the unnatural practice of feeding herbivores with animal protein and speculation that turkey feed might be implicated in this outbreak of bird flu. As Beck (1992: 79) noted:

Farmers were viewed for centuries as the ‘peasantry’ wresting the ‘fruits’ from the soil, on which the life and survival of everyone depended, but this image is beginning to be transformed into its opposite. In this new view, agriculture becomes a distribution point for the toxins that threaten the lives of animals, plants and people.
In this view, the ‘death factories’ of Bernard Matthews are symbolic of all that is wrong with modern methods of food production, where the emphasis is on profit at the expense of human health, animal welfare and food quality. Several respondents alluded to ‘turkey twizzlers’ in their comments, referencing the television series ‘Jamie’s School Dinners,’ broadcast in 2005, in which celebrity chef Jamie Oliver campaigned to have highly processed foods (such as the turkey twizzler) removed from school menus (Observer 2005).

One further theme that came to prominence, and which deserves some discussion, is that of *Jingoism*. As the work of Douglas (1992) has suggested, ‘foreigners’ are often blamed for new epidemics of diseases. When it was reported in the media (and the Have Your Say message board changed the question accordingly) that bird flu may have been brought into the country from Hungary, many comments reflected this view that ‘foreigners’ and imported meat was to blame, and this became a dominant theme in the later part of the message board. In this sense, this risk/blame model connects with reactions to plagues stretching back through history. The people in the category of ‘other’ are seen as responsible for the genesis of the disease and its spread. In the food domain, Draper and Green (2002) point to consumers’ use of ‘scales of safety’ in food choice. These scales are based on the geographical provenance of food, with homegrown being the safest and imported food the most risky. Another study looking specifically at meat found that respondents suspected that other countries might not have the same safety regulations as Britain (notwithstanding that British standards are determined by EU regulations), and even if they did, that they would not be as strictly applied (Cragg Ross Dawson 2007).

Finally, it is worth considering the merits or otherwise of the method by which we acquired the current data. We argue that, in spite of problems related to lack of knowledge about the characteristics of the message board sample, the data obtained from this source is informative, at least in a qualitative sense. In the present case, for example, it allowed analysis of reactions of a large number of people to an ongoing incident. To the best of our knowledge, such data has not been collected by more conventional methods (though this is not to say there are not other studies currently undergoing journal review). One study on this issue that we have subsequently found is a qualitative study looking at attitudes to meat hygiene and perceptions of meat safety, which makes passing reference to consumer perceptions of the bird flu incident (Cragg Ross Dawson 2007). However, the fieldwork for this study was conducted in May 2007 (well after the initial crisis) and the focus group respondents indicated that although the bird flu incident had prompted some worries at the time, the authorities had dealt with the situation effectively. Relying on such an analysis, however, risks missing important early framings of the issue, which, after all, and as indicated earlier, did seem to have significant (if perhaps short term) affects on actual consumer (purchasing) behaviour. Future research might attempt to compare responses from message board samples to samples attained through more usual methods, and might also seek to identify and characterize the people who do respond to these. It may also be of interest to examine how the media responds to such commentary, and whether policy makers are influenced by them. It would certainly be a shame if the research community did not attempt to make best use of the rich potential sources of data these processes may provide, augmenting data collected through more traditional approaches.

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Note
1. The management of the outbreak involved three main agencies: DEFRA and the SVS were responsible for implementing animal health measures as outlined in the EU Avian Influenza Directive; the Health Protection Agency (HPA) was responsible for the health of employees and the general public; and the Food Standards Agency (FSA) and Meat Hygiene Service (MHS) had responsibility for food safety (FSA 2007a).

References


