

Civilization and madness: the great BSE scare of 1996

Sheila Jasanoff

During the UK's BSE crisis of 1996, citizens and their public institutions experienced an unprecedented breakdown of communication that I call 'civic dislocation'—a mismatch between what governmental institutions were supposed to do for the public, and what they actually did. Trust in government vanished, and people looked elsewhere for information and advice. In the UK, public confidence in governmental advisers rests on the reliability of persons rather than (primarily) the rationality of their views; in the USA, on the other hand, trust rests in formal processes and styles of reasoning that ensure the transparency and objectivity of governmental decisions. UK policy institutions require a set of conditions—among them a shared, unambiguous problem definition, relative certainty about 'objective facts' and identifiable expert knowledge—which in the BSE case simply did not exist. Given the pervasive uncertainties, the distance between citizens and experts was greatly reduced, and the lay public was almost as well positioned as the experts to make sensible decisions about how to avoid the risk of BSE. This reading of civic dislocation in the UK should make us wary of recent proposals to create pockets of insulated expertise within the US risk management system to neutralize unfounded public fears through rationality, expertise, insulation and authority. A programme that values rationality and efficiency most highly leaves little room or reason for lay inputs; and, by putting too little faith in people and too much in the objectivity of formal analysis, may also carry the seeds of civic dislocation.

Historians often deplore the raggedness of the documented past, which lends an unfinished quality to the stories they wish to tell. Making sense of the present, however, can be equally risky business. In our information-soaked age, the sheer volume of noise around any headline event almost overwhelms reflection. Then, too, the present has an annoying habit of not holding still. Time keeps moving, actors follow unexpected courses, records heap up, commentaries and instant analyses proliferate. This is why contemporary policy analysis often seems most compelling when the issues it addresses have reached a degree of stability—through the enactment of a law, the handing down of a judgment or the settlement of a public controversy.

Sometimes, however, a public occurrence proves too momentous to be held at bay. One has to engage with it at once, even at the risk of reading its meanings imperfectly. This is what happened in the spring of 1996 when I was in England on sabbatical leave working on a study of biotechnology policies in Europe and the USA. The crisis over bovine spongiform encephalopathy (BSE), or 'mad cow disease,' that broke over the UK in March of that year brought together many of the themes that were central to my research: the interactions of science and political culture, expertise and democracy, technological risk and policy uncertainty. Here was an opportunity to observe, in real time, how a policy system grappled with the worst kind of threat to its political and scientific credibility: a disease of

however, threw ordinary governmental routines into hopeless confusion. Efforts to contain damage in Europe proved especially disastrous. British ministers and scientists appeared in Brussels looking like petulant children unwilling to play by grown-up rules, a cause for consternation and embarrassment back home. With the policy apparatus seemingly incapable of acting effectively,⁹ journalists and the public turned to their leaders for bizarre personal reassurances that they had not stopped eating beef. Pattison, the government's chief scientific adviser on CJD, freely admitted that his grandson was not allowed to eat beef.⁸ Perhaps less ingenuously, a dozen or so cabinet ministers told the *Independent* that beef still featured on their family dinner tables.¹⁰ John Gummer, the Secretary of State for the Environment, became the butt of jokes and questions about his beef-eating habits. When BSE was first detected in 1988–89, Gummer had notoriously created a photo-opportunity by stuffing a hamburger into his little daughter's mouth. That scene returned to haunt him as cartoonists searched for appropriate images to capture the absurdity and confusion of the 1996 crisis.¹¹

The food industry, by contrast, swung rapidly into action to restore consumer confidence, with gestures that went significantly beyond the government's anodyne assertions that beef could be safely eaten. Some McDonald's outlets put up signs promising that they would not serve hamburgers until they could establish a secure supply-line from Argentina. Giant supermarket chains such as Sainsbury's and Tesco took over aspects of risk communication and even risk management that ordinarily belong to government agencies. They issued detailed fact sheets that not only vouched for the quality of their beef and beef products, but also explained the precautions being taken to monitor production. Offered under private auspices, and without the constraints of legal and political accountability, these policies nevertheless appropriated the look and language of public monitoring and enforcement programmes. Thus, a Sainsbury's fact-sheet announced that all 'brand products containing beef are sourced from a select group of *approved* suppliers who are *visited regularly* by *qualified* food technologists' (my emphasis) and that 'an additional control is provided by our long standing policy of not using MRM (mechanically recovered meat) in any Sainsbury brand product.'

Even actors with relatively small stakes in the matter felt called upon to communicate with their clients about the risks of BSE. At the Red Lion, a charming 'olde English' pub and restaurant in the tiny Oxfordshire village of Steeple Aston, the enterprising host printed the following text on his menu:

Following the trend to *Consumer Protection* we advise that game items on this menu may contain shot and should be eaten no less warily than ever they were before modern society expected this warning.

As for Beef? Well—one may only remind customers that perhaps the risks entailed fall amongst those like descending ones [*sic*] staircase, driving home, or perhaps, winning the lottery, and, at worst, that it is not, yet, regarded as poisonous! We regard the controversy with hopeful wonder and will respond to evidence as and when it is published.

Behind the humour lurked a serious perception that something was missing in the official communications on BSE. As the innkeeper's message implies, we normally expect science and government to provide credible measures of 'relative risk.' Such comparisons can give individuals and communities valuable guidance about how to sort through and rank the hazards of everyday life in accordance with their particular needs and preferences. Since neither government nor science seemed prepared to provide the requisite 'evidence' in the

case of BSE, a country pub catering to the Oxford bourgeoisie moved to rectify expert omission with common sense.

Consumer and public interest organizations also took the lead not only in advising whether and in what forms to eat beef, but also, more interestingly, with ideas about how to reform the UK's regulatory institutions so that the errors of the BSE case would not be repeated. The influential Consumers' Association, in particular, spearheaded a drive to create a new, independent Food Standards Agency, situated outside the scientifically and politically discredited Ministry of Agriculture, Fisheries and Food (MAFF).¹² That such an agency should be under discussion was not in itself surprising. MAFF's questionable ability to balance public health against agriculture's economic interests had long been a concern to consumer advocates. In the USA, similar doubts had led to the separation of the Environmental Protection Agency (EPA) from the US Department of Agriculture in 1970, and the legal mandate of the Food and Drug Administration (FDA) had been strengthened several times to guard against capture by industrial interests. The more notable point was simply that the proposal for major institutional reform in this area—the first in nearly fifty years—was initiated not by government, but by a non-profit interest group (or charity), providing another striking example of civic dislocation.¹³

In the dislocated state, as well, some actions that might have been expected from government agencies were not performed at all. Particularly surprising to American eyes was the failure of government experts to place any meaningful quantitative limits on the risk of contracting BSE or on the impact of proposed culling policies. Little attempt was made in the first few weeks of the crisis to counteract in any way the apocalyptic vision of a half-million cases projected by some scientists outside the official advisory system. Asked in December 1996 whether the UK was at the start of a new epidemic, John Collinge, a leading expert on prion disease, was quoted as saying, 'It's impossible to predict.'¹⁴ It was as if, having been shaken in their deep conviction that BSE could not be transmitted to humans, government officials and scientists had no resources left to evaluate other hypotheses, particularly those admitting a wider range of uncertainty about possible outcomes.

New scientific information emerged more convincingly on the pages of the journal *Nature* than in official government publications. Part of the information deficit could be attributed to MAFF's extreme reluctance to disclose data in its possession to scientists, politicians or the public.¹⁵ Only the threat that senior British researchers might discuss their frustrations with science journalists seemed powerful enough to cut through the ministry's cloak of confidentiality. Although MAFF had been commissioning internal studies and reports on BSE for several years, it was not until August 1996 that a team of Oxford scientists published an authoritative study of the epidemiology of BSE, together with estimates of risk reduction under various culling strategies.¹⁶

The paralysis of British science in the face of the crisis was notable enough to draw comment from at least one well-placed member of the nation's scientific establishment. In testimony to a committee of the European Parliament, Sir Richard Southwood, chair of the UK government's first Working Party on BSE, regretted the lack of adequate scientific guidance:

I believe that the scientists must try to indicate the probabilities of various outcomes. It is easy to say the hypothesis has not been tested and therefore there may be a great risk or none at all. This is a way of ensuring that one is not wrong, but in my personal view such an evasion of providing guidance is a dereliction of one's duty, as a scientist, to society.¹⁷

Here, in the linking of 'unnatural' to 'modern' one finds—in the dry, restrained text of an expert advisory report—a clue to the anxiety about the modern condition that swept the UK, and Europe, on the discovery of human 'mad cow disease.'

Social theorists of risk have begun in recent decades to identify some of the reasons for the public's growing skepticism that the complex feats of technological construction on which modernity rests are wholly within anybody's control. In part, the decline in confidence can be seen as a perverse consequence of the ramifying power of science. As expertise is more widely shared, consensus becomes more difficult to achieve and the limitations of all expert claims become ever more transparent; expertise precipitates, in effect, an attack upon its own authority. Coupled to this phenomenon of 'reflexive modernization'²⁰ is the recent tendency of the liberal state to disavow regulatory responsibility for technological systems it previously sought to manage. The resulting devolution of power may well have brought some gains to sub-state communities in both the UK and the United States. At the same time, when carried out under the name of privatization, the state's retreat has left large domains of productive activity in the control of agents whose accountability to the public is secured, if at all, only through the imperfect mechanism of the market.²¹

The second line of finger-pointing targets British institutions. Will Hutton, the political commentator and author of the best-selling book *The State We're In* (seen, before Blair's rightward drift, as the bible of 'New Labour'),²² is one influential exponent of this view. In describing British institutions, Hutton approvingly quotes Lord Radcliffe, who remarked in his 1951 Reith lectures that the British had:

[a] habit of praising their institutions which were inept and of ignoring the character of their race, which is often superb. In the end they will be in danger of losing their character and being left with their institutions: a result disastrous indeed.

Hutton emphatically agrees:

The public spirit, tradition of fair play and respect for opponents that leavened Britain's medieval political system have been trampled underfoot, leaving us only the institutions, in all their resplendent awfulness.²³

Hutton is wrong, I think, to divorce institutions from character. Students of British politics cannot help being struck, on the contrary, at how close the connections are in the UK between institutions and character. Personal integrity and public influence walk hand in hand; one cannot aspire to the latter without showing evidence of the former. It is no accident that difficult policy choices are so often committed to advisory bodies of the 'great and the good'—to people, that is, who couple power with virtue, whose capacity for governance has been tested in gradually widening spheres of action until they are seen as reliable, discreet and worthy of public trust. Institutions that build on such foundations cannot simply be dismissed as 'inept' (as Lord Radcliffe suggested) or 'awful' (as Hutton sees them). They do, however, presume a relationship between a society and its 'great and good' representatives—a relationship founded on shared values and deference to expertise—that is increasingly at odds with the conditions of citizenship in the modern world.

A contrast between British and American processes for obtaining expert advice may help to underscore the point. In British advisory committees, trust is created through embodiment in trustworthy people: peers, professors, tested public servants, representatives of established interest groups or responsible citizen organizations. Over and above any demonstrations of technical competence, such individuals have proved their right to represent the public interest through years of devoted service. Many have earned knighthoods or other honours in recognition of their contributions to public life. The most eminent are elevated to the

Engaging institutions

Reflecting on the causes of civic dislocation in post-BSE Britain leads to some more general conclusions about controlling risk in democratic societies. British policy institutions, I have suggested, are not intrinsically 'inept' or 'awful'; they may indeed represent, under some circumstances, a more effective blend of competence and civic virtue than their counterparts in the USA. But they do require a set of background conditions in order to carry out their tasks in ways that merit public confidence: these include a widely shared and unambiguous problem definition, relative certainty about the relevant 'objective facts,' clearly identifiable expert knowledge about these facts, a reasonable convergence of societal values, and a more or less bounded space for the articulation of views and conduct of deliberations. When these conditions are present, day-to-day engagement between experts and citizens may indeed be superfluous. A discreet, well-insulated process, founded on expert judgment, may be quite capable of producing decisions that are balanced, persuasive, efficient and, most important of all, *right*.

In the BSE case, as in a growing number of environmental conflicts in advanced industrial societies, these conditions simply did not exist. How prion diseases originate and spread is among the most mysterious problems currently confronting the biomedical sciences. Further, if expert knowledge about the disease and its transmission was inadequate, knowledge about the social context of disease transmission was even more strikingly absent. BSE appeared and took hold within a technological system only parts of which were amenable to characterization and control by research scientists and public health experts. Much of the expertise relevant to policy-making was either unavailable or else too widely dispersed to be adequately represented by a handful of prominent individuals. Thus, information vital to halting the spread of BSE, such as the likelihood of compliance in the feed industry, was sorely lacking when the Southwood committee drew up its initial recommendations. A year after the crisis, European regulators were still determining by trial and error what rates of compensation would give farmers adequate incentives to comply with reporting requirements.²⁷ Finally, British decision-makers and citizens could not expect to muddle through the BSE crisis on their own. In an economically interdependent world, including substantial ties between British producers and consuming publics elsewhere in Europe, the UK's regulators could not count on their embodied 'goodness' to make their case in political cultures with vastly different conceptions of trust and public virtue, as well as very different formal mechanisms for ensuring accountability.

Given the pervasive uncertainties surrounding BSE, the presumed distance between citizens and experts was greatly reduced. The scientifically uninformed public was almost as well positioned as the experts to make sensible decisions about how to avoid the ill-defined and poorly characterized risk of BSE—for example, by adopting various dietary restrictions. Yet, the UK's characteristically insulated decision-making process excluded wide public involvement until the government's disavowal of any risk to human beings was shown to be unfounded. University-based scientists who might have helped speed knowledge production likewise remained too long in the dark. Ironically, the British public learned only after the fact that government experts such as Pattison had been taking the kind of common-sense precautions (not feeding beef to grandchildren) that they too might have wished to take had they been better informed about the uncertainties of BSE transmission.

Turning back to the politics of regulation in the USA, my reading of civic dislocation in the UK should make us especially wary of proposals such as that recently put forth by Supreme Court Justice Stephen Breyer to create pockets of insulated expertise within the US system of risk management.²⁸ Breyer criticizes contemporary US environmental policy for

of forgetting that life is more complex than any attempt to model it, and that those who make decisions ultimately must persuade people that they have exercised their discretion virtuously. If the UK has relied too much on character and experience, thereby consolidating power in relatively few individuals, Americans perhaps have erred in the opposite direction, putting too little faith in people and too much in the objectivity of formal analysis. In either case, the representations of the world that policy-makers respond to can drift dangerously far from the world that their fellow citizens experience and inhabit.

In a classic collection of essays published in the late 1940s, the critic Lionel Trilling spoke of the paradox of the liberal imagination:

So far as liberalism is active and positive ... it tends to select the emotions and qualities that are most susceptible of organization. As it carries out its active and positive ends it unconsciously limits its view of the world to what it can deal with, and it unconsciously tends to develop theories and principles ... that justify its limitation.³⁰

Trilling was writing about the risks of tying literature and literary criticism to an overly narrow conception of the public good, but risk management as well springs from a liberal impulse toward a more beneficent and rational ordering of human life. Unfortunately, in the urge to comprehend and control, such policies also carry the danger of defining hazards too narrowly and of failing to appreciate what it is that people fear or find uncertain about the modern condition. As they organize their analytic and deliberative practices,³¹ and seek to communicate with citizens, US regulatory institutions and their leaders would do well to heed Trilling's admonition. A politics of excessive rationality built on too simplistic a reading of complexity may also carry the seeds of civic dislocation.

Acknowledgements

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- 9 See, for example, Mad, bad and dangerous. *Economist*, 25 May 1996.
- 10 What the Cabinet will be eating. *Independent*, 22 March 1996, p.5.
- 11 See, for example, Scarfe, G., 1996, What have we been fed? *Sunday Times, News Review*, 24 March 1996, p.5.
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- 13 The Conservative government did eventually propose institutional reform, but with the party's defeat in the May 1997 election, it turned out to be too little and too late. Butler, D., 1997, UK seeks to appease food safety critics. *Nature*, 385, 474.

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Historians often deplore the raggedness of the documented past, which lends an unfinished quality to the stories they wish to tell. Making sense of the present, however, can be equally risky business. In our information-soaked age, the sheer volume of noise around any headline event almost overwhelms reflection. Then, too, the present has an annoying habit of not holding still. Time keeps moving, actors follow unexpected courses, records heap up, commentaries and instant analyses proliferate. This is why contemporary policy analysis often seems most compelling when the issues it addresses have reached a degree of stability—through the enactment of a law, the handing down of a judgment or the settlement of a public controversy.

Sometimes, however, a public occurrence proves too momentous to be held at bay. One has to engage with it at once, even at the risk of reading its meanings imperfectly. This is what happened in the spring of 1996 when I was in England on sabbatical leave working on a study of biotechnology policies in Europe and the USA. The crisis over bovine spongiform encephalopathy (BSE), or 'mad cow disease,' that broke over the UK in March of that year brought together many of the themes that were central to my research: the interactions of science and political culture, expertise and democracy, technological risk and policy uncertainty. Here was an opportunity to observe, in real time, how a policy system grappled with the worst kind of threat to its political and scientific credibility: a disease of

poorly understood origins and transmissibility whose incidence might have been, but was not, curtailed by timely governmental action. This was a kind of scholarly serendipity from which I could not lightly walk away.

What follows here is an effort to shape an orderly narrative out of what was—and continues to be—a most disorderly episode. It is not, to be sure, an entirely arbitrary story, since it builds on years of comparative research on European and US approaches to risk management.¹ To a long-time observer of risk policy-making, some aspects of the official response to the news of BSE's spread to humans seemed distinctively British; similar responses could not, for instance, have been so readily imagined in the political culture of the USA. At the same time, the BSE crisis unfolded in ways that even the best informed analyst of UK policy could not have predicted. In trying to make sense of these surprises, we can deepen our understanding of the contemporary politics of risk—not only in the UK, but, by extension, also in the USA and other industrial democracies.

March madness

On 20 March 1996, Stephen Dorrell, then the Secretary of State for Health, announced in the House of Commons that ten cases of a new form of Creutzfeldt-Jakob disease (CJD) had been diagnosed in human patients; the government's Spongiform Encephalopathy Advisory Committee (SEAC) had identified these as most likely to have been caused by exposure to the related cattle disease, BSE.² The solemn setting belied the announcement's seemingly matter-of-fact tone and content. It was, and was immediately seen to be, full of consequence.

The same day, SEAC scientists held a press conference at which they explained their reasons for connecting the human disease to the animal strain: the pathology, the behavioral symptoms and the age distribution (several cases had been diagnosed, unusually, in people in their teens and twenties) all supported the committee's conclusion. Asked how large a risk the public might be facing, Professor John Pattison, the committee chair, spoke of 'an AIDS-like epidemic'; he could not rule out an upper limit as high as one half-million for future infections.³ What made the news so appalling was not just the thought that beef, a staple of the British diet, could be fatally contaminated. It was not even that CJD struck without notice, was incurable, and caused a horrifying death. It was that, since 1988, the government and some of its advisers had repeatedly stated that beef was safe, a formulation widely taken to mean that transmission of BSE from cows to people was impossible. If government officials had deliberately misled the public, then how could anything they now said be trusted?

Political humour frequently provides a window on popular anxiety. The cartoons that began appearing almost immediately in the UK press expressed widespread feelings of bewilderment, loss of innocence, disorientation, distrust and rage. Worries about the UK's international standing quickly surfaced, as well as fear of possibly disastrous economic consequences. Beef was an important agricultural export to European Union partner nations, especially Germany and France, and billions of pounds hung in the balance. One telling cartoon showed Rodin's famous burghers of Calais, one gagging, the rest looking pained and scornful, all tossing hamburgers off their pedestal; the caption read 'The Burgers of Calais.'⁴ The cartoonist's concerns were validated as panic spread over Europe, penetrating into quite remote places. Barely a week after the SEAC announcement, I saw a sign at an outdoor market in Syracuse, Sicily, guaranteeing that only domestic beef was sold there. From Palermo to Potsdam, a popular revolt against British beef was under way.

More than a year later, reporting about BSE still echoed the same pessimistic themes. Disenchantment with the government's mishandling of the problem persisted and a

however, threw ordinary governmental routines into hopeless confusion. Efforts to contain damage in Europe proved especially disastrous. British ministers and scientists appeared in Brussels looking like petulant children unwilling to play by grown-up rules, a cause for consternation and embarrassment back home. With the policy apparatus seemingly incapable of acting effectively,⁹ journalists and the public turned to their leaders for bizarre personal reassurances that they had not stopped eating beef. Pattison, the government's chief scientific adviser on CJD, freely admitted that his grandson was not allowed to eat beef.⁸ Perhaps less ingenuously, a dozen or so cabinet ministers told the *Independent* that beef still featured on their family dinner tables.¹⁰ John Gummer, the Secretary of State for the Environment, became the butt of jokes and questions about his beef-eating habits. When BSE was first detected in 1988–89, Gummer had notoriously created a photo-opportunity by stuffing a hamburger into his little daughter's mouth. That scene returned to haunt him as cartoonists searched for appropriate images to capture the absurdity and confusion of the 1996 crisis.¹¹

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consensus emerged that ministerial bungling had greatly increased the price the UK would have to pay. Writing for the *New Yorker* in December 1996, John Lanchester, a British journalist, commented on the sad decline of Maurice Callaghan, the first person to be declared a victim of BSE-related CJD by a coroner's inquest. A symptom of his illness, said the victim's brother, was that he had failed a standard test for psychiatric patients: he could not remember the Prime Minister's name—'though that may be because it's John Major.'⁵

Fear, too, has scarcely receded. The respected American science writer Richard Rhodes refers to BSE as possibly the UK's 'new Black Death' in his new book, *Deadly Feasts*.⁶ In reviewing the book, the neurologist and physician Oliver Sacks says, 'I have many friends and colleagues, not particularly given to fads and overreactions, who have given up eating beef.'⁷ Lanchester, for his part, likened the predicament of British citizens to that of the stranger in the countryside who asks a passer-by for directions; 'If I were you,' says the passer-by, 'I wouldn't try to get there from here.' Lanchester calls post-BSE Britain 'that place—the one nobody wants to set out from.'⁸ People may have resumed eating beef in a cautious way, but the feeling of abandonment remains. To evaluate the long-term impact of the crisis on British politics and society, as well as its wider implications for democratic government, I would like to focus on an unsettling phenomenon that manifested itself in the weeks and months after BSE was formally linked to human CJD. I call it 'civic dislocation.'

Civic dislocation

There was, by any reckoning, an unprecedented breakdown of communication between British citizens and their public institutions in the aftermath of the announcement of 20 March. In advanced industrial societies, governing institutions, such as legislatures, cabinets, regulatory agencies and advisory committees, play a critically important role in protecting the public against the complex uncertainties of the modern condition. Much of their work today centres on predicting, and if possible controlling, the unintended consequences of technological change. Without authoritative, expert institutions, we could not be reasonably sure that the air is safe to breathe, that aeroplanes will take off and land safely, that new medical treatments will not unexpectedly kill patients, that chlorofluorocarbons will not eat away the earth's ozone shield—and, most pertinently for our purposes, that the food we buy is safe to eat. Lives lacking such assurance would be impossibly difficult to cope with, both pragmatically and psychologically. The legitimacy of public institutions depends increasingly on meeting the public's need for credible reassurance. Citizens look to top government officials and their expert advisers for up-to-date information about risks to health, safety and the environment, as well as the steps one should take to mitigate them. Yet, it is precisely the capacity to reassure that seemed to fail during the BSE crisis.

The phenomenon that I call civic dislocation expressed itself as a mismatch between what governmental institutions were supposed to do for the public and what they did in reality. In the dislocated state, trust in government vanished and people looked to other institutions—the high street butcher, the restaurant, the media, the supermarket—for information and advice to restore their security. It was as if the gears of democracy had spun loose, causing citizens, at least temporarily, to disengage from the state. The resulting disarray could be observed on many fronts.

In democratic nations, the process of policy-making is as important for political well-being as its results. The routines of data collection, rational analysis and considered policy judgment impart a sense of continuity and order in public life, especially when such tasks are carried out in full view, with opportunities for citizen participation. The BSE story,

case of BSE, a country pub catering to the Oxford bourgeoisie moved to rectify expert omission with common sense.

Consumer and public interest organizations also took the lead not only in advising whether and in what forms to eat beef, but also, more interestingly, with ideas about how to reform the UK's regulatory institutions so that the errors of the BSE case would not be repeated. The influential Consumers' Association, in particular, spearheaded a drive to create a new, independent Food Standards Agency, situated outside the scientifically and politically discredited Ministry of Agriculture, Fisheries and Food (MAFF).¹² That such an agency should be under discussion was not in itself surprising. MAFF's questionable ability to balance public health against agriculture's economic interests had long been a concern to consumer advocates. In the USA, similar doubts had led to the separation of the Environmental Protection Agency (EPA) from the US Department of Agriculture in 1970, and the legal mandate of the Food and Drug Administration (FDA) had been strengthened several times to guard against capture by industrial interests. The more notable point was simply that the proposal for major institutional reform in this area—the first in nearly fifty years—was initiated not by government, but by a non-profit interest group (or charity), providing another striking example of civic dislocation.¹³

In the dislocated state, as well, some actions that might have been expected from government agencies were not performed at all. Particularly surprising to American eyes was the failure of government experts to place any meaningful quantitative limits on the risk of contracting BSE or on the impact of proposed culling policies. Little attempt was made in the first few weeks of the crisis to counteract in any way the apocalyptic vision of a half-million cases projected by some scientists outside the official advisory system. Asked in December 1996 whether the UK was at the start of a new epidemic, John Collinge, a leading expert on prion disease, was quoted as saying, 'It's impossible to predict.'¹⁴ It was as if, having been shaken in their deep conviction that BSE could not be transmitted to humans, government officials and scientists had no resources left to evaluate other hypotheses, particularly those admitting a wider range of uncertainty about possible outcomes.

New scientific information emerged more convincingly on the pages of the journal *Nature* than in official government publications. Part of the information deficit could be attributed to MAFF's extreme reluctance to disclose data in its possession to scientists, politicians or the public.¹⁵ Only the threat that senior British researchers might discuss their frustrations with science journalists seemed powerful enough to cut through the ministry's cloak of confidentiality. Although MAFF had been commissioning internal studies and reports on BSE for several years, it was not until August 1996 that a team of Oxford scientists published an authoritative study of the epidemiology of BSE, together with estimates of risk reduction under various culling strategies.¹⁶

The paralysis of British science in the face of the crisis was notable enough to draw comment from at least one well-placed member of the nation's scientific establishment. In testimony to a committee of the European Parliament, Sir Richard Southwood, chair of the UK government's first Working Party on BSE, regretted the lack of adequate scientific guidance:

I believe that the scientists must try to indicate the probabilities of various outcomes. It is easy to say the hypothesis has not been tested and therefore there may be a great risk or none at all. This is a way of ensuring that one is not wrong, but in my personal view such an evasion of providing guidance is a dereliction of one's duty, as a scientist, to society.¹⁷

These are strong words in a policy culture that is famous for understatement, but they reflect an inadequate understanding of the conditions that caused science's apparent loss of nerve with respect to BSE. It was not, as Southwood suggests, a simple moral failing (a 'dereliction of duty') on the part of the scientific community. It was tied up with deeper institutional deficits that the UK's Conservative leadership had not been able to correct in almost a decade, and that now will confront Tony Blair's Labour government in the wake of its historic electoral victory.

Democracy and distrust

Why did British policy institutions fail so conspicuously to rise to the challenges of governance presented by BSE? Speculating on this question helps us come to grips with some of the basic problems of trust and legitimacy that all modern governments encounter in more or less urgent form when coping with technological and environmental risks. It also draws British experience nearer to that of the USA, allowing us to reflect on the threat of civic dislocation in other democratic polities.

Conventional wisdom has offered two explanations for what went wrong in the UK's BSE crisis: one is to blame MAFF, the ministry in charge of promoting agriculture and regulating food safety; the other is to blame British institutions more broadly. Neither explanation, as we shall see, goes quite far enough. My own assessment is that British society has changed in profound ways that call for new forms of engagement between citizens and their government, and that institutions which may have been robust enough in their time will have to reconsider some of their fundamental assumptions in order to catch up with the altered state of things. Problems of disengagement, however, are not the UK's alone; they could equally arise, though in different guises, in other late modern democracies.

There is little question that MAFF's policies helped to exacerbate the crisis from the very first moment that BSE was reported in British cattle herds. The ministry was known to favour agricultural interests over consumer and even public-health concerns, and thus was committed to down-playing risks that might undermine consumer confidence and harm its major political clients. MAFF, moreover, had followed the Thatcherite policy of deregulation and allowed for relaxation in rendering practices including treatment at lower temperatures, shorter treatment periods, and elimination of some solvents. These moves, some felt, were directly responsible for the transmission of scrapie—a prion disease like BSE—from sheep into cattle feed, and from there into cattle. And following the release of the Southwood committee's report,¹⁸ MAFF did not undertake the vigorous programme of research and risk assessment that the committee had urged and that many thought absolutely necessary in view of BSE's potential transmissibility to humans. The ministry's monitoring and enforcement efforts also fell short of securing full compliance with the ban on specified offals introduced in 1990.

But MAFF's dereliction alone does not explain the pervasiveness and severity of the British public's response to BSE, nor the panic provoked in other parts of Europe. From early on, BSE was associated with a sense of disorder more profound than mere worries about regulatory laxness. The feeling of things being systematically wrong—against nature—seeped into a sentence or two of the Southwood committee's 1989 report:

We note that this disease appears to have resulted from unnatural feeding practices as found in modern agriculture. We question the wisdom of methods which may expose susceptible species of animals to pathogens and ask for this general issue to be addressed.¹⁹

Here, in the linking of 'unnatural' to 'modern' one finds—in the dry, restrained text of an expert advisory report—a clue to the anxiety about the modern condition that swept the UK, and Europe, on the discovery of human 'mad cow disease.'

Social theorists of risk have begun in recent decades to identify some of the reasons for the public's growing skepticism that the complex feats of technological construction on which modernity rests are wholly within anybody's control. In part, the decline in confidence can be seen as a perverse consequence of the ramifying power of science. As expertise is more widely shared, consensus becomes more difficult to achieve and the limitations of all expert claims become ever more transparent; expertise precipitates, in effect, an attack upon its own authority. Coupled to this phenomenon of 'reflexive modernization'²⁰ is the recent tendency of the liberal state to disavow regulatory responsibility for technological systems it previously sought to manage. The resulting devolution of power may well have brought some gains to sub-state communities in both the UK and the United States. At the same time, when carried out under the name of privatization, the state's retreat has left large domains of productive activity in the control of agents whose accountability to the public is secured, if at all, only through the imperfect mechanism of the market.²¹

The second line of finger-pointing targets British institutions. Will Hutton, the political commentator and author of the best-selling book *The State We're In* (seen, before Blair's rightward drift, as the bible of 'New Labour'),²² is one influential exponent of this view. In describing British institutions, Hutton approvingly quotes Lord Radcliffe, who remarked in his 1951 Reith lectures that the British had:

[a] habit of praising their institutions which were inept and of ignoring the character of their race, which is often superb. In the end they will be in danger of losing their character and being left with their institutions: a result disastrous indeed.

Hutton emphatically agrees:

The public spirit, tradition of fair play and respect for opponents that leavened Britain's medieval political system have been trampled underfoot, leaving us only the institutions, in all their resplendent awfulness.²³

Hutton is wrong, I think, to divorce institutions from character. Students of British politics cannot help being struck, on the contrary, at how close the connections are in the UK between institutions and character. Personal integrity and public influence walk hand in hand; one cannot aspire to the latter without showing evidence of the former. It is no accident that difficult policy choices are so often committed to advisory bodies of the 'great and the good'—to people, that is, who couple power with virtue, whose capacity for governance has been tested in gradually widening spheres of action until they are seen as reliable, discreet and worthy of public trust. Institutions that build on such foundations cannot simply be dismissed as 'inept' (as Lord Radcliffe suggested) or 'awful' (as Hutton sees them). They do, however, presume a relationship between a society and its 'great and good' representatives—a relationship founded on shared values and deference to expertise—that is increasingly at odds with the conditions of citizenship in the modern world.

A contrast between British and American processes for obtaining expert advice may help to underscore the point. In British advisory committees, trust is created through embodiment in trustworthy people: peers, professors, tested public servants, representatives of established interest groups or responsible citizen organizations. Over and above any demonstrations of technical competence, such individuals have proved their right to represent the public interest through years of devoted service. Many have earned knighthoods or other honours in recognition of their contributions to public life. The most eminent are elevated to the

(unelected) House of Lords, where they are in a position to influence some of the nation's most significant legal and policy decisions. People who have attained this status can be said, with little exaggeration, to constitute an elite tier of civic virtue that stands, and is seen to stand, above self-interest and even party politics.

In the British regulatory process, then, public confidence in governmental advisers is secured through testing the reliability of persons rather than (primarily) the rationality of their views. When an advisory committee is properly constituted, it represents an unbeatable mix of character, experience and technical expertise. Formal justification of its recommendations then seems uncalled for. It is enough to show that the best people were selected to evaluate the situation and to draw the appropriate conclusions. Their collective judgment could not be bettered by inserting other, less experienced people in their places. One consequence of this approach is that there has been relatively little need for British advisers to develop formal discourses of public legitimation, such as, in cases of the kind we are considering, quantitative risk assessment.²⁴

Discussion within advisory bodies is invariably private, though, in principle, wide-ranging and unconstrained. Advisers often relay their conclusions to decision-makers in confidence, and reports, when they are published, are rarely backed by records of behind-the-scenes arguments or dissent. Consultation with the general public occurs by invitation rather than as of right, and the consultative process is designed to exclude opinion that looks radical, irrational, or lacking in significant social and scientific support. Care is taken to prevent the decision-making environment from turning adversarial, since too much conflict might polarize views and impede deliberation, and also to avoid open expressions of uncertainty that might unnecessarily worry the public. In short, the facade presented to the outside world is one of quiet authority.

To a remarkable degree, the cultural characteristics of caution, empiricism and restraint have imprinted themselves on the provision of scientific advice bearing on health, safety and environmental risks. British environmental science, for instance, has been criticized for its failure to recognize the indeterminacy of knowledge about complex environmental systems—and to underestimate, in consequence, the need for precautionary policies.²⁵ In a relatively closed and consensual decision-making context, the knowledge claims of technical experts are not always subjected to searching scrutiny. Expert assessments thus may rest on tacit assumptions about society and nature that are at best unfounded and at worst erroneous.²⁶ The Southwood committee's confidence that the offal ban would be stringently monitored and prove effective can be seen as displaying this kind of naivete.

The US situation could not, in some respects, be more different. As has repeatedly been observed, the US policy culture is open, adversarial, formal and legalistic where the UK's is closed, cooperative, informal and consensual.²⁴ Persons do not command much faith in late-twentieth-century US politics. Instead, trust is reposed in formal processes, such as rule-making and litigation, and in styles of reasoning that ensure the transparency and objectivity, if not the wisdom, of governmental decisions. In this policy environment, no expert or official can be counted on to exercise discretion honestly unless subjected to continual supervision and challenge. The American preference for multiple checks and balances has led in the arena of risk management to highly elaborated techniques for rationalizing policy choices. Faced with phenomena of increasing complexity, and lacking agreement about the 'best' way to proceed, US decision-makers have sought more and more to justify their actions through seemingly objective, mathematical assessments of risks, costs, benefits and, lately, even environmental justice or equity. Paradoxically, policy-making in this most open and transparent of political cultures has come to depend most aggressively on abstruse, technical and distancing expert discourses.

Engaging institutions

Reflecting on the causes of civic dislocation in post-BSE Britain leads to some more general conclusions about controlling risk in democratic societies. British policy institutions, I have suggested, are not intrinsically 'inept' or 'awful'; they may indeed represent, under some circumstances, a more effective blend of competence and civic virtue than their counterparts in the USA. But they do require a set of background conditions in order to carry out their tasks in ways that merit public confidence: these include a widely shared and unambiguous problem definition, relative certainty about the relevant 'objective facts,' clearly identifiable expert knowledge about these facts, a reasonable convergence of societal values, and a more or less bounded space for the articulation of views and conduct of deliberations. When these conditions are present, day-to-day engagement between experts and citizens may indeed be superfluous. A discreet, well-insulated process, founded on expert judgment, may be quite capable of producing decisions that are balanced, persuasive, efficient and, most important of all, *right*.

In the BSE case, as in a growing number of environmental conflicts in advanced industrial societies, these conditions simply did not exist. How prion diseases originate and spread is among the most mysterious problems currently confronting the biomedical sciences. Further, if expert knowledge about the disease and its transmission was inadequate, knowledge about the social context of disease transmission was even more strikingly absent. BSE appeared and took hold within a technological system only parts of which were amenable to characterization and control by research scientists and public health experts. Much of the expertise relevant to policy-making was either unavailable or else too widely dispersed to be adequately represented by a handful of prominent individuals. Thus, information vital to halting the spread of BSE, such as the likelihood of compliance in the feed industry, was sorely lacking when the Southwood committee drew up its initial recommendations. A year after the crisis, European regulators were still determining by trial and error what rates of compensation would give farmers adequate incentives to comply with reporting requirements.²⁷ Finally, British decision-makers and citizens could not expect to muddle through the BSE crisis on their own. In an economically interdependent world, including substantial ties between British producers and consuming publics elsewhere in Europe, the UK's regulators could not count on their embodied 'goodness' to make their case in political cultures with vastly different conceptions of trust and public virtue, as well as very different formal mechanisms for ensuring accountability.

Given the pervasive uncertainties surrounding BSE, the presumed distance between citizens and experts was greatly reduced. The scientifically uninformed public was almost as well positioned as the experts to make sensible decisions about how to avoid the ill-defined and poorly characterized risk of BSE—for example, by adopting various dietary restrictions. Yet, the UK's characteristically insulated decision-making process excluded wide public involvement until the government's disavowal of any risk to human beings was shown to be unfounded. University-based scientists who might have helped speed knowledge production likewise remained too long in the dark. Ironically, the British public learned only after the fact that government experts such as Pattison had been taking the kind of common-sense precautions (not feeding beef to grandchildren) that they too might have wished to take had they been better informed about the uncertainties of BSE transmission.

Turning back to the politics of regulation in the USA, my reading of civic dislocation in the UK should make us especially wary of proposals such as that recently put forth by Supreme Court Justice Stephen Breyer to create pockets of insulated expertise within the US system of risk management.²⁸ Breyer criticizes contemporary US environmental policy for

its chronic waste and inefficiency, and gives three reasons for this state of affairs. First, he says, agencies are guilty of 'tunnel vision,' which has led them to regulate negligible risks at enormous social and political cost. Second, he berates a random agenda-setting process which he sees as too much driven by irrational public fears. Finally, he blames political pressures and lack of institutional coherence for inconsistent results in environmental risk management.

Breyer's proposed solution is to establish within the executive branch of the US government an agency that sounds remarkably like a British expert body:

... mission oriented, seeking to bring a degree of uniformity and rationality to decision making in highly technical areas, with broad authority, somewhat independent, and with significant prestige. Such a group would make general and government-wide the rationalizing efforts in which EPA is currently engaged.²⁹

This group's success would depend on neutralizing unfounded public fears through the traditional bureaucratic virtues of rationality, expertise, insulation and authority.

A regulatory reform programme that values rationality and efficiency most highly leaves little room or reason for lay inputs. Justice Breyer's underlying assumption, echoed in the UK's initial response to BSE, is that too much public involvement tends to magnify unknown and unfamiliar risks, regardless of their actual significance, and thus may lead to economically and scientifically irrational outcomes. I have suggested, however, that this kind of reasoning over-estimates both the extent and the power of expert knowledge, and gives citizens too little credit for coping with complexity. An important lesson of the BSE crisis is that earlier engagement between citizens and experts might have led to more comprehensive and better characterization of risks, as well as well diversified and realistic policy responses. Wider consultation might, for example, have illuminated the risks of faulty compliance in the feed production industry—a topic that fell outside the range of expertise on MAFF's first advisory committee.

More generally, lay questioning, however ignorant or ill-considered, might have led to deeper reflection on the limits of expert knowledge and, in turn, to more collaboration among citizens, scientists and government about how to manage the multiple uncertainties of mad cow disease. Top-down regulation could have been supplemented from the start by voluntary precautions undertaken by citizens and other private actors. By displaying their uncertainties from the start, state institutions might in the end have commanded more trust. It is a telling irony that, at the height of the scare over BSE, the British public seemed to get more direct information and advice from their supermarkets than their government—suggesting that democracy was functioning more effectively in the marketplace than in politics. Vulnerable to even the slightest fluctuations in consumer confidence, the food industry was prepared to give more information, promise more controls, and offer more choices to consumers than the government agencies charged with protecting public health.

American regulatory practices appear, at first blush, to avoid the most salient pitfalls of the British approach. US agencies have many more routines in place to ensure continual dialogue between decision-makers and their public clients and critics: notice and comment, administrative hearings, congressional oversight, litigation, media investigations. Uncertainties in science and policy are openly debated. Bureaucratic insulation is not (*pace* Justice Breyer) the American norm, even though it may unintentionally result from public alienation or apathy. For US citizens, however, there is another kind of risk that comes from too great a reliance on formal analysis to solve problems that are, at bottom, as much about politics and values as they are about scientific knowledge and specialized expertise. In the pursuit of objective reasons for public choice, American policy-makers run the risk

of forgetting that life is more complex than any attempt to model it, and that those who make decisions ultimately must persuade people that they have exercised their discretion virtuously. If the UK has relied too much on character and experience, thereby consolidating power in relatively few individuals, Americans perhaps have erred in the opposite direction, putting too little faith in people and too much in the objectivity of formal analysis. In either case, the representations of the world that policy-makers respond to can drift dangerously far from the world that their fellow citizens experience and inhabit.

In a classic collection of essays published in the late 1940s, the critic Lionel Trilling spoke of the paradox of the liberal imagination:

So far as liberalism is active and positive ... it tends to select the emotions and qualities that are most susceptible of organization. As it carries out its active and positive ends it unconsciously limits its view of the world to what it can deal with, and it unconsciously tends to develop theories and principles ... that justify its limitation.³⁰

Trilling was writing about the risks of tying literature and literary criticism to an overly narrow conception of the public good, but risk management as well springs from a liberal impulse toward a more beneficent and rational ordering of human life. Unfortunately, in the urge to comprehend and control, such policies also carry the danger of defining hazards too narrowly and of failing to appreciate what it is that people fear or find uncertain about the modern condition. As they organize their analytic and deliberative practices,³¹ and seek to communicate with citizens, US regulatory institutions and their leaders would do well to heed Trilling's admonition. A politics of excessive rationality built on too simplistic a reading of complexity may also carry the seeds of civic dislocation.

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