

“BRITISH MAD COWS” AND “NEUROTIC GERMANS”?
THE BSE/nvCJD CRISIS OF THE 1990s

“British Mad Cows” and “Neurotic Germans”? The BSE/nvCJD Crisis Of The 1990s

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「英國狂牛症」與「恐懼的德國人」？

九〇年代 BSE 與 nvCJD 病毒危機

【摘要】

1980 年代中期，BSE (Bovine Spongiform Encephalopathy) 病症，也就是我們慣稱的狂牛症，首度在英國被認定為牛隻的疾病。之後，人們開始關注如此罕見的腦部絕症（類似癢病，一種綿羊的慢性神經機能病）是否會經由牛肉的食用，以變種病毒 nvCJD (Creutzfeldt-Jakob Disease) 的形式傳染給人類。直至今日為止，歐洲已經有 29 起個案被診斷為受 CJD 感染而喪命（其中一部分是否為此病毒感染仍存疑）。

德國對「狂牛症危機」所做出回應，在歐洲聯盟執委會禁止英國牛肉製品出口的決議中扮演了重要的角色。而一份德國研究報告中指出，德國對狂牛症的民意反應與疾病防制有相當的關聯。本文由狂牛症的研究報告與德國政府與人民的回應中討論，德國特殊的回應正解釋了德國的民意力量、聯邦政府的功能，以及德國香腸在當地飲食中所佔的民生重要地位。

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BSE (Bovine Spongiform Encephalopathy) was first recognised as a cattle disease in Britain in the mid-1980s. Thereafter, concerns began to be expressed regarding the possible transmission of this rare but incurable brain disease (resembling "scrapie" in sheep, first observed in British sheep in the 1720s) to humans in the form of a "new variant" of Creutzfeldt-Jakob Disease (CJD) through the consumption of beef from infected cattle. So far nvCJD has been "diagnosed" as the cause of death of 29 individuals (with doubts in some cases).

The paper is concerned with the German response to the "Mad Cow crisis", which played a major role in the European Commission decision to ban the export of cattle products from Britain. It is suggested that there is a link between the ("West") German response to BSE and the removal of the "security" the "Iron Curtain" provided. Further, the particular German reaction is accounted for by the "volatility" of public opinion, the federal structure of government and the prominence of sausage (Wurst) in the local diet.

The Microbe is very small
You cannot make him out at all,
But many sanguine people hope
To see him through a microscope.
His jointed tongue that lies beneath
A hundred curious rows of teeth;
His seven tufted tails with lots
Of lovely pink and purple spots,
On each of which a pattern stands,
Composed of forty separate bands;
His eyebrows of a tender green;
All these have never yet been seen.
But scientists, who ought to know,

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Assure us that they must be so ...
Oh! Let us never, never doubt
What nobody is sure about.
(Hilaire Belloc).

I. Prologue

A phenomenon that has had a major impact on Britain's relations with the rest of the European Union (especially Germany) from the late 1980s is commonly referred to as "Mad Cow Disease". Designated by scientists as Bovine Spongiform Encephalopathy, BSE is an incurable neurological disease of cattle that was first definitely identified on a farm in Britain in 1986. By the early 1990s it had reached what some might denote as epizootic proportions in the UK.¹ From the beginning of the 1990s a number of Western European countries began to report cases of BSE, although on nothing like the scale of the UK. The Irish Republic reported the first cases (15) in 1989. As of 1 August 1998 the total number was 314.² Switzerland began to report BSE cases from 1990 and had a total of 281

1 From 2,469 confirmed cases in 1988, the number peaked at 36,682 in 1992 in a national herd of about 11 million head. Thereafter the number of cases declined, at first gradually, to 34,370 in 1993. 23,945 were confirmed in 1994, 14,300 in 1995 and 8,016 in 1996, the peak year of the BSE crisis. 4,311 cases were confirmed in 1997 and 1,290 up to 1 August 1998. (http://www.oie.int/Status/A_bse.htm) These figures are indicative, as they are based on autopsies on cattle showing the clinical symptoms of BSE. It is plausible that an unknown number of cattle were slaughtered to enter the human food chain before showing the clinical symptoms.

2 Up to 1995 the figures include imported cattle. Some of the latter were plausibly illegally imported from Northern Ireland for the purpose of claiming compensation, in a falling market for cattle, under the arrangement in the Republic where the entire herd is slaughtered when a single case of BSE is reported.

by 1 August 1998. Portugal, where the first (single) case was also reported in 1990, had a total of 167 by 1 August 1998. In France the first case was reported in 1993 and the total by 1 August 1998 was 43.

In the Irish Republic 199 of 314 cases reported since 1989 occurred over the period from 1996 to 1 August 1998. The peak for Portugal was the first half of 1998, with 76 of a total of 281 cases since 1990. Belgium, the Netherlands and Luxemburg reported their first cases in 1997 Belgium one, with six more up to 16 November 1998; the Netherlands two, with one more up to 18 August 1998; Luxemburg one with none in 1998. The mini-state of Lichtenstein reported its first two cases in 1998.³ The acceleration of the case-rate in the Irish Republic, Portugal and France from 1996, and the first reporting of cases in Belgium, the Netherlands, Luxemburg and Liechtenstein from 1997, occurred long after the assumed cause of the disease had been eliminated.

The majority scientific opinion favours the view that cattle contracted BSE by being fed meat-and-bone meal (MBM) that included offal from sheep infected with a spongiform encephalopathy known as scrapie. This disease has been widespread in flocks in the UK for at least 200 years (but also exists among those in other parts of Europe) without being known to "jump species".⁴ The transmission of scrapie from sheep to become BSE in cattle is presumed to have occurred through the latter being fed MBM derived from scrapie-infected sheep produced in the UK at a lower than previous

3 [Http://www.oie.int/Status/A_bse.htm](http://www.oie.int/Status/A_bse.htm)

4 Scrapie is a Transmissible Spongiform Encephalopathy confined to sheep that was first identified in British flocks in 1732. There is suspicion in some quarters that the "scrapie hypothesis" was adopted by the UK Ministry of Agriculture to explain BSE because human mutton eaters had suffered no ill effects from eating scrapie-infected sheep.

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temperature from the early 1980s (and then perhaps through the addition of MBM to cattle fodder from BSE-infected cattle).

The agent of both scrapie and BSE has so far not been positively identified. Essentially all we have are hypotheses. The most widely accepted of the latter among scientists is that the disease agent is a protein, a "rogue" or deformed protein called a prion (known as PrPres), which it is claimed to be found in autopsies concentrated in the brains of animals infected by the disease (as well as in the spinal cord and eyes). However, proteins lack nucleic acid and therefore cannot replicate themselves. To overcome this basic microbiological problem, we have only another hypothesis that PrPres prions coming into contact with "normal" proteins in the bodies of mammals convert them into their form as a means of multiplication to result in spongiform brains.

Within the EU concern about BSE began to emerge in the late 1980s (when it was exclusively reported as a disease of British cattle) in particular with regard to possible transmission to humans.⁵ This concern reached crisis proportions from 20 March 1996, when the UK government released the view of its Spongiform Encephalopathy Advisory Committee (SEAC) that a possible link existed between BSE in cattle and ten identified human cases of what was deemed to be a new variant of Creutzfeldt-Jakob-Disease (nvCJD).⁶

5 This concern has to be set against the background of the AIDS scare of the 1980s, which turned out to involve a new disease agent (the retrovirus HIV) which may have jumped species from apes to humans in Africa.

6 What is now known as "Classic" CJD is a rare and incurable neurological disease (a Spongiform Encephalopathy) that affects approximately one in million persons over the age of 55 (with the median age being about 65). It was first identified in the 1920s. It involves the accumulation of abnormal protein (prions) in the brain to produce a spongiform appearance. What causes normal protein to become abnormal is as yet unknown. Some scientists believe a virus of some sort is involved. Others adopt the view that it is

In response the EU imposed a worldwide ban on the export of beef and other cattle products from the UK. With this prohibition the EU in effect eschewed all responsibility for the health of citizens of the UK insofar as they continued to consume locally-produced beef. Certainly Brussels did not, as one German newspaper claimed, 'save the British people from its own government'.⁷ The British were only ones still allowed to eat it.

A rare (but incurable) spongiform encephalopathy discovered in the 1920s, the case rate of CJD in humans is around one in a million per annum. The disease typically affects persons over 50 years of age; although there is an even rarer genetically derived form that may strike earlier (usually involving people in their 40s or 50s). So far, up to late 1997 a total of 29 cases of nvCJD have been identified in the UK (plus one in France, about which there is some doubt). The significant and only characteristic these victims share in common (apart from UK citizenship in almost all cases) is that they were from a younger age category (ranging from 16 to 42 years of age) than those dying from sporadic or genetic CJD.

On the basis of the facts so far, nvCJD - with a link with BSE in cattle that has still to be proven scientifically - is hardly a cause for alarm. More teenagers and young adults die monthly in road accidents in the UK than have hitherto ceased to exist on account of nvCJD in over a year. The two E-coli food poisoning outbreaks in Scotland in late 1996 claimed 21 lives within a short space of time.

caused by the spontaneous mutation of normal protein. It is not a Transmissible Spongiform Encephalopathy (TSE) such as scrapie, which was first identified in British sheep in the 1720s. With Bovine Spongiform Encephalopathy the disease agent has been found in the spinal cord and corneal tissue as well as in the brain - but not in the meat of cattle. It is therefore assumed that BSE is a degenerative disease affecting and transmitted to the brain through the central nervous system.

⁷ Berliner Zeitung, 27 Mar. 1996.

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In the week ending 10 January 1997 an epidemic of influenza resulted in about 5,500 more deaths in the UK than the usual weekly rate of around 14,000. The "news interest" was confined to bodies being stacked two-deep in mortuaries and gravediggers working through the night with the assistance of floodlights. In 1997 alone over 200 children and young adults in the UK died from a resurgence of meningococcal meningitis and septicaemia (which last appeared in similar case and death rates in 1947). Yet BSE and the possible link to 12 human deaths attributed to nvCJD produced a major crisis from early 1996 in intergovernmental relations within the EU (in particular but far from exclusively between the UK and the other members), threatened the "timetable" of progress towards European integration, especially strained relations between the UK and Germany, had a major impact in stirring up inherited animosities between member countries (again particularly but not exclusively between the UK and Germany), brought about significant dietary changes in some countries (which may involve an acceleration of trends rather than radical new departures), and considerably enhanced public distrust of national governments and their agencies (especially those concerned with agriculture and food) as well as the European Commission.

II. BSE and Intergovernmental Relations

The primary political impact of BSE has been in the area of relations between the UK and almost all other members, individually and collectively, especially after the 20 March 1996 announcement when the EU responded with a world-wide ban on UK exports of cattle products. The issue has been described, with some justification as in essence an "Anglo-German conflict".⁸ However, the BSE

⁸ Electronic Telegraph, 26 Jan. 1997.

crisis has not only involved Germany and the UK, or the UK against the rest of the EU. The impact has been negative upon relations between members of the EU other than the UK and Germany and with "third countries". France was annoyed when Germany placed a ban on "Specified Bovine Material" (SBM) from that country; that is on the spinal cord, brain and eyes where the prions presumed responsible for BSE congregate.⁹ The Swiss were outraged that Bonn initiated a unilateral ban on cattle and cattle products from that country - soon to be followed by Austria, Italy and France - after the Swiss began to report BSE cases.¹⁰ Largely in retaliation Switzerland banned pigmeat imports from five German states in response to outbreaks of swine fever. (Swiss farmers' organisations demanded the extension of the ban to the whole of Germany).¹¹ Not being a member of the EU with access to the European Court of Justice, in April 1997 Switzerland initiated a case against the EU with the World Trade Organisation (WTO). In late April 1997, with falling demand for beef, the Swedish farmers' union launched a campaign

9 Jürgen Krönig, in *Die Zeit*, 29 May 1996.

10 *Die Welt*, 26 Oct. 1996.

12 In October 1989 the Swiss Veterinary Office sent a circular the veterinary officers for cantons stating that BSE was no threat to Swiss herds as no UK meat and bone meal fodder (MBM), the suspected means of disseminating the disease, had been imported from that country. In the summer of 1990 the Office introduced a requirement to report any BSE cases in order to show the disease did not exist in Switzerland. The situation soon proved to be otherwise. It was then discovered that MBM from the UK had been relabelled as to its origin and imported through France. (Some consignments were sent to Germany). This then became, on insufficient grounds, the explanation for the existence of the disease in Switzerland. (*Sonntags-Zeitung*, 19 Jan. 1997). The French claim the MBM was first shipped to Ireland for relabelling. (*Times*, 15 Jan. 1997). UK MBM exports increased from 12,543 tonnes in 1988 (the year the cattle source was banned in the UK) to 25,005 in 1989. 10,072 tonnes were shipped overseas in 1990 and it is possible exports continued up to 1996. (*Tages-Zeitung*, 7 Feb. 1997). In March 1996 a vegetarian activist was convicted of disturbing the peace for distributing leaflets warning about BSE in Zurich. (*Tages-Anzeiger*, 30 Mar. 1996).

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against imports of Irish beef, claiming that a quarter is "Belgian blue" (which requires calves to be delivered by Caesarian) and that the Irish used the "barbaric" halal method of slaughter.¹²

Beyond Europe the BSE crisis has had a negative effect on the major beef exporting countries, Australia, the USA and Argentina, where initially it was believed that BSE in Europe and the ban on UK exports of cattle products would create market opportunities. Instead the result was a substantial decline in per capita beef consumption in the major markets of Europe and North America. In the USA an Oprah Winfrey show devoted to BSE in Britain, with possible implications for American beef consumers (in which the host announced her decision not to eat another hamburger) resulted in a dramatic price fall on the Chicago beef futures market and a decline in US beef consumption.¹³ Oprah, her TV production company and a guest on the show (Howard Lyman, an ex-cattle rancher currently an activist with the Humane Society) are now being sued by Texas cattlemen under a law of that state that 'protects agricultural products from slander'.¹⁴

As a result of the crisis, during 1996 the EU began to acquire a "beef mountain" in intervention stocks which it attempted to reduce from around March 1997. By mid-April 1997 large quantities of low-quality beef from the EU were being dumped on the South African market (with a subsidy equivalent to half the retail price) to the

12 Bauernzeitung, 31 Jan. 1997.

13 Irish Times, 1 May 1997. The Irish Department of Agriculture claimed less than one per cent "Belgian blue" and that with the closure of markets in the Middle East there was virtually no halal slaughtering. Belgian Blue is a breed of cattle with particularly high rate of calving difficulty. (S. Suther, 'Consistent Diversity', Beef Today, August, 1997).

14 For the first time since its establishment, trading in live cattle futures on the Chicago exchange was suspended when the price for April 1996 delivery fell 1.5 cents a pound - the daily limit under exchange rules.

detriment of local producers.¹⁵ For Christmas 1998 UK and other EU governments are distributing thousands of tonnes of canned beef stew to the 'homeless and other low-income people in need', in an effort to reduce the emerging "beef mountain" at a cost only slightly more than that involved in export subsidies. (It's canned on the assumption that not only the "homeless" but also the "needy" don't have refrigerators but do have access to can openers).¹⁶

It was nevertheless Germany that first expressed serious concerns about the emerging BSE epizootic in the UK, played a major role in initiating moves for a world-wide ban on exports of UK cattle products and has subsequently been most reluctant to make concessions towards its rescision. At the level of popular opinion, especially in the UK, the issue has also been perceived as a clash between Germany and the UK. In Germany demonstrating farmers have burnt the Union Jack and called for the expulsion of Britain from the EU. But that pales into insignificance when set against the anti-Germanism unleashed - perhaps one should say revived - in the UK in the course of the BSE crisis. The role of Germany in the issue provided "grist for the mill" of the Euro-sceptics within the Tory Party, especially in accentuating fears of the EU becoming a German-dominated entity. For sections of the Tory press it provided a means of "continuing" the Second World War.

It is notable, however, that the succeeding "New Labour" government in the UK, which on entry to office avowed they would be "Good Europeans", by late 1997 became embroiled in a conflict with the rest of the EU over the BSE issue. Faced with increasing cheap beef imports from other EU members, bolstered by a "strong" currency, the UK government decided to ban beef imports from coun-

15 Electronic Telegraph, 27 September 1996, 18 June 1997; <http://www.mad-cow.org/~tom/oprah.htm>. Similar laws against the defamation of livestock exist in 12 other US states. (The Scotsman, 27 June 1997).

16 Irish Times, 16 April 1997.

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tries, such as Germany in particular, that did not impose the same abattoir standards as the UK in response to the BSE crisis.¹⁷ This scenario suggests that the matter transcends the internal struggle for the "soul" of the Tory Party in Britain and lingering anti-German attitudes on the British Right.

The explanation for Germany's prominence in advocating the ban on UK beef exports is complex. Bonn to a considerable extent reacted to pressure from domestic public opinion. Having said that, it is necessary to account for the particular concern of the German public with the issue. It is suggested that public opinion in Germany has for many years now been far more concerned with environmental, and relatedly health and diet issues, than any other country in the EU, with the possible exception of the new Scandinavian members. There is also a perception that public opinion in Germany, in particular in the former West Germany, is notably volatile.¹⁸ This has been attributed by the German head of the Nestlé company to 'a German problem - a tendency towards mystical irrationalism. We were more prominent in the Romantic era than in the Renaissance, [and] have exaggerated the Gothic more than others'.¹⁹ To

17 Electronic Telegraph, 24 Dec. 1997.

18 This involves the removal for destruction of what are now termed Specified Risk Materials, most notably the spinal cord. Among other EU countries the practice has been adopted by Eire, France and the Netherlands.

19 Das Sonntagsblatt, 31 Mar. 1996. An opinion poll conducted in Berlin in early May 1996 found that as a result of the BSE "scare", whereas only 34 per cent of West Berlin respondents had not reduced their meat consumption in consequence, the figure for East Berliners was 51 per cent. While only 18 per cent of West Berlin respondents expressed 'little concern' about food supply, nearly a third (30 per cent) of East Berlin respondents were of that view. There was a correlation between income and the extent of concern, with West Berliners being still significantly better off materially than those of the capital of the former GDR. (Berliner Zeitung, 16 May 1996). The former, unlike the latter, had been subjected to a series of earlier food scandals. (These have included contaminated baby food, adulterated olive oil, salmonella tainted eggs and ethylene glycol in wine). Part of the deviation of re-

this one might add a greater penchant for absolutist solutions, as exemplified by much of modern German history, than most other Europeans. This is represented by a particular German concern for the elimination of risk, which is unfortunately intrinsic to human existence.

It is perhaps pure coincidence that the BSE crisis coincided with the end of the Cold War and the removal of the Iron Curtain. Speculative as it may be, it is suggested that the removal of an established perceived threat to West Germans created a kind of vacuum in which a new source of angst became virtually a necessity. In contrast to a tradition established from the days of the Mongol-Tatars, through those of the Turks, Russians and Russian Communists, on this occasion the BSE/nvCJD threat came from the West. (Early in 1997 a headline in the Moscow newspaper *Izvestia* announced "Cow Madness Marches Eastwards Faster than NATO").²⁰

In the EU member states generally the reaction to BSE was exacerbated by the removal of barriers to the movement of people, goods and livestock between member states, which has aroused concerns about the possible transmission of life-threatening contagious diseases. At the moment, for example, there is apparently a "looming epidemic" of Caseous lymphadenitis (CLA) among sheep in the UK. The disease can be fatal, causes abscesses on the skin and damage to lungs, lymph nodes and other organs. It arrived in the UK from Germany about seven years ago with a cargo of goats. In the opinion of Graham Baird of the Scottish Agricultural College: 'This disease is a test of what happens when you have totally open borders in Europe'.²¹

sponses from East Berliners may also be accounted for by the greater faith they expressed in, and preference for, local sources of food supply.

²⁰ Interview in *Die Zeit*, 19 July 1996.

²¹ *Irish Times*, 15 Feb. 1997.

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In the case of the UK in particular the emerging BSE crisis coincided with the era of what is generally referred to as "Thatcherism"; the privatisation of state enterprises that by the late 1980s had begun to extend to government agencies responsible for public health matters. The role of the state was in the process being reduced beyond Adam Smith's "nightwatchman", who functioned to ensure that property was secure and that "competition" existed in the market during trading hours, to the privatisation of responsibility for public health. Several scientific agencies of the UK Ministry of Agriculture, Fisheries and Food (MAFF) were targeted for such privatisation in a review conducted by the Board of Trade. In the interim the later Thatcher years witnessed a substantial reduction in the number of scientists employed by MAFF. It is plausible that this "ideologically-driven" policy direction, which included the privatisation of meat inspection services at abattoirs, aroused some unease among consumers. On 29 January 1997, courtesy of a "Dorothy Dixier" from Sir Patrick McNair Wilson, the Tory MP for the New Forest, then Minister of Agriculture Hogg was able to assure the public that the Veterinary Laboratory Services of MAFF would not be privatised.²²

With West Germany the removal of the so-called Iron Curtain enhanced uncertainty as to the future. German unification created an angst among sections of the UK public regarding a potential dominance of the European Union by Germany, which was available for exploitation on the BSE issue by a popular press in the UK - largely owned by the Murdoch and Black groups - for anti-European integration objectives and to bolster an increasingly unpopular Conservative government.

In most of Continental Europe there is an endemic concern about rabies; essentially, albeit rarely in recent times, transmitted to

²² Electronic Telegraph, 17 May 1997.

humans from foxes through fights with dogs that in turn bite and infect people. A reading of the Berlin press indicates a measure of concern at the increasingly visible presence of foxes in West Berlin (presumably from Brandenburg where a high proportion are rabies infected) with the removal of "the Wall" as a highly effective "fox fence".²³ Normally a shy and retiring animal (and a nocturnal hunter), through rabies a fox tends to lose these inhibitions. The resulting fear among West Berliners is not generally shared by the citizens of Paris or London, where there is recognition of the fact that the fox, as a scavenger, has found in cities a preferable habitat to that of a countryside with diminishing sources of food supply. (Chickens are nowadays generally kept in "fox-proof" buildings in battery cages, myxomatosis has considerably reduced the rabbit population and, essentially through the increasing use of pesticides and herbicides in European agriculture, the numbers of other fauna have been considerably diminished as potential suppers for "Reynard").

The very high proportion of "meat" in Germany consumed in the form of sausage/salami (about 60 per cent), which traditionally contains a high proportion of offal, may have contributed to the particular concern about BSE among the German public.²⁴ The presumed agent of BSE, the prion, is known to concentrate in the spinal cord, eyes and brain of the infected beast. Efforts to eliminate the possibility of transmission of BSE to humans, as nvCJD, consisted of removing this Specified Risk Material SRM) in the slaughtering process, from both "meat" for humans and offal for rendering into MBM. Unlike the UK, Switzerland, Eire, France and the Netherlands, Germany has not responded to the BSE crisis by ordering the

²³ <http://www.maff.gov.uk/>

²⁴ Since 1992, at considerable cost, an aerial program of dropping baits for foxes containing a vaccine against rabies has been conducted over eastern Germany (Berliner Zeitung, 30 April 1994).

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removal and incineration of SRM from slaughtered cattle.²⁵

Further concern might have arisen in Germany from the fact that, as on the Continent in general, the preference with beef is for veal or yearling rather than the roasts derived from older cattle that account for a high proportion of beef consumption in the UK. Clinical symptoms of BSE do not generally appear in cattle until they are at least four years old.²⁶ Consequently, an inestimable number of BSE-infected beasts - as the hypothetical cause of human nvCJD with a long gestation period - may have entered the human food chain long before they began to show visible signs of the disease.²⁷ This matter is further complicated by the early overt symptoms of BSE being indistinguishable from those of a range of neurological disorders relatively common in cattle, including rabies.²⁸ It is interesting that Belgium, which has not reported any BSE cases (until one in late 1997), has experienced a notable increase in "rabies" cases since 1994. In the latter year only a cat and a badger were diagnosed as rabies-infected. In 1996 there were over 200 cases, including 44 cattle.²⁹

25 There are over 1,500 types of sausage sold in Germany, as against 20 in France. (Das Sonntagsblatt, 1 Jan. 1997). In the UK, in response to the BSE crisis, sales of mincemeat declined far more than cuts and have recovered least.

26 The Scotsman, 8 July 1996).

27 All but one of the BSE cases reported in Eire up to March 1996 were cows over four years of age. (Irish Times, 28 Mar. 1996).

28 Some official comments on the issue in Germany (as elsewhere) have hardly been conducive to allaying public concern. For example, on 4 May 1994 German newspapers carried the announcement by the Ministry of Health that 'two Germans have died from eating contaminated British beef'. The next day a spokesperson for the Ministry corrected this to read that two imported beasts from the UK had died of BSE. (Berliner Zeitung, 4-5 May 1996). (They had actually being slaughtered and incinerated).

29 The pathology of rabies is also remarkably similar to that of BSE, with the viral agent penetrating the nerve endings and travelling along the fluid that circulates in the nerve axons to the spinal cord, on its way to the brain. (Tim

The governmental structure of Germany, federal as against unitary in the other states of the EU, also assists in explaining the key role Bonn played in the BSE issue. The Länder in Germany, with their own agencies responsible for such areas as agriculture and health, are able to exercise considerable influence on Bonn (while at the same time being more subject themselves to "grass roots" pressure from the public and from interest groups, including the farm lobby).³⁰ From early February 1995 individual state governments in Germany imposed their own bans on UK beef as a means of exerting pressure on Bonn. On 5 September the Bundesrat, the upper house of the German parliament representing the state assemblies, passed a motion calling for an immediate and effective national ban on imports of beef from the UK.³¹ In August 1996 some German states began to press for the extension of the ban to UK dairy products, after the British reported the possible transmission of BSE from cow to calf (but not through the milk).³² By contrast to the influence exercised on the centre by the German Länder, the county councils of the UK could do little more than ban beef from school meals.³³

III.

While public opinion, especially in Germany, has played a role in the BSE crisis, it cannot be denied that all national governments within the EU have acted primarily to defend their own economic interests and those of powerful lobby groups in the agricultural sector.

Radford, in the *Guardian*, 13 June 1996).

30 *Electronic Telegraph*, 21 Oct. 1996).

31 German Länder have established their own "embassies" in Brussels to lobby the European Commission. (See *Der Spiegel*, No. 32, 8 August 1998.

32 *Berliner-Zeitung*, 8 Feb. 1995, 16 Dec. 1995.

33 *Irish Times*, 6 Aug. 1996. They also wanted the ban extended to lamb, of which Germans consume very little, on the presumed ground that scrapie in sheep was the source of BSE. A number of countries demanded that the Swiss guarantee that the milk in their dairy products and chocolate exports be from "BSE-free" herds. (*Tages-Anzeiger*, 9 April 1997).

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According to one source an estimated 300,000 out of 550,000 German farmers depend largely on beef for their livelihood and exports are substantial.³⁴ Beef exports are of considerable importance for the EU generally. In 1995 the EU accounted for 25 per cent of the world total, approximately the same as Australia and exceeding the 20 per cent of the USA.³⁵ Certain EU members, most notably the Republic of Ireland, are heavily dependent on world beef markets. With a national herd of over seven million, approximately twice the number of citizens (as compared with around 11 million in the UK to supply 55 million consumers and a significant export before the EU ban was imposed from April 1996 accounting for around 30 per cent of output), beef is Eire's largest export. Throughout the EU beef production is generally a business of large-scale producers and they tend to exercise considerable influence within farmer organisations, on agriculture ministries and on the conservative governments that have ruled in almost all EU countries in recent times.³⁶

The BSE crisis occurred at a particularly critical juncture. A "beef mountain", accumulated in intervention stocks under the Common Agricultural Policy (CAP) in the 1980s, was effectively cleared by the early 1990s (ahead of the likely outcome of the Uruguay Round of negotiations under GATT/WTO) at a considerable cost in the form of subsidies. Extensive (albeit subsidised) beef

34 Recently, on account of the impasse regarding tax reform between the coalition majority in the lower house (Bundestag) and the opposition one in the upper house representing the states, pressure is emerging to create a more unitary state in Germany. For the German Federation of Industry this represents adjustment to the increasing "globalisation" of the German economy. In the light of historical experience this demand arouses concern in some quarters. (See *taz-die tageszeitung* and *Die Welt*, 9 Aug. 1997).

35 *Die Welt*, 30 Aug. 1996. Apart from the increase in domestic beef consumption (and exports) during the 1980s, German farmers were motivated to switch from dairy to beef cattle by the reduction of milk quotas from 1990 with the incorporation of the former GDR.

36 *Das Sonntagsblatt*, 31 Mar. 1996.

export contacts had been established with a range of countries in the Middle East and with Russia, including considerable Irish live cattle exports to Egypt etc. Then the doubts in external markets that began to appear in the early 1990s with the BSE epizootic in Britain resulted in an implosion, echoed on domestic markets, with the 20 March 1996 announcement of a possible link between BSE and nvCJD. By that time a certain identification of individual member states with the EU in external markets had emerged, not least through the amount of subsidised beef disposed of from EU intervention stocks. This was compounded in the case of Ireland by a limited clarity in some external markets regarding the distinction between that country from the UK (and Northern Ireland) and, in the Middle East, a fear of importing BSE "on the hoof".³⁷ Perhaps inevitably other member countries of the EU sought to isolate the UK product from their own. The efforts of the German government have been moderately successful. The Irish are annoyed that as a result of around 200 BSE cases being reported in Eire so far, they have lost to Germany the position of the EU's largest beef exporter to non-EU markets.³⁸ Germany has gained a substantial position in the large Russian beef market. Farmers in Eire are apparently "seeing red".³⁹

The BSE crisis has threatened the cohesion of some member states of the EU, or at least enhanced existing centrifugal forces. This is most clearly the case with the UK, where the great majority of

37 It appears that the EU has overcompensated cereal growers to the amount of Ecu 17 billion (€11.88 billion) during the four years to June 1997, on account of market prices rising rather than falling as anticipated. Asked why nothing had been done to adjust the rate of compensation, an EC official stated that "the grain lobby is very strong with agriculture ministers". (Financial Times, 30 April 1997).

38 The Irish Times 26 March 1996 accused the UK government of being 'the architects of a policy which has damaged the reputation of European beef as a whole'.

39 Financial Times, 17 Mar. 1997. Ireland remains the largest net exporter of beef.

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BSE cases have been reported in England. The refusal of the UK government to press for a partial exemption from the ban for the largely grass-fed beef of Ulster and Scotland was not exactly welcomed by public opinion in those provinces.⁴⁰ The Scots were far from pleased when the Ulster authorities, with only a slightly lower ratio of reported BSE cases to herd size, moved to press for an exemption for that province.⁴¹ In the opinion of the President of the Scottish NFU: "Our fear is that, if a special deal is done for Northern Ireland, their farmers will export beef and take markets which we spent years in building up in France and Italy". The Scots have been accused by the President of the Ulster NFU of 'behaving like spoiled children', in wanting to stop Ulster farmers from 'enjoying something they cannot have'.⁴²

Relations between Belfast and Dublin also became somewhat strained by the BSE crisis.⁴³ What was once a fairly open border between Eire and Ulster (with a number of farms straddling it) was sealed, after the 20 March 1996 announcement of the UK government, for the movement of cattle (more securely than for the northward flow of semtex and nitrogenous fertilizer with explosive properties). According to Superintendent Micheal Duffy, the office in charge of the Garda at Ballyshannon on the border: "There have not been any security measures like this since 1967, when there was a foot-and mouth outbreak". This occurred in part on account of the

40 Irish Times, 17 Oct. 1996.

41 Within cattle farming the emphasis in Scotland and Ulster is on beef, as against dairying in England and Wales. In Scotland about 75 per cent of calves are reared in specialist beef herds, whereas around 60 per cent in the EU generally come from dairy herds. Exports of beef, before the EU ban was imposed from April 1996, accounted for about a quarter of Scottish output. (The Scotsman, 26 Mar. 1996, 19 Dec. 1996).

42 Irish Times, 29 Nov. 1996. Sinn Fein endeavoured to exploit the issue with calls for an "all-Ireland beef policy". (An Phoblacht, 22 Aug. 1996).

43 Electronic Telegraph, 29 Oct. 1996.

substantial differential that then emerged between cattle prices in the Republic and Ulster. A certain urgency for the operation was imparted by rumours that BSE-infected cattle from Ulster were being smuggled into the Republic, to enable farmers there to claim the generous compensation paid for the destruction of entire herds with a single proven case, and the threat that posed to Eire's beef exports.⁴⁴ Thereafter, the farmer in possession of a BSE-infected beast would be able to restock at lower prices in a falling market for cattle, and perhaps gain further access to compensation payments through connections with Ulster. Dublin recouped part of the costs of this expensive exercise through increased police presence in border areas motivating a readiness to pay outstanding fines for traffic offences.⁴⁵

The Republic of Ireland is a country heavily dependent on beef production. In recent times it has accounted for about a third of total agricultural output and is predominantly an export industry: in fact Ireland's major export.⁴⁶ The Irish Times view of a decision of the Russians to exclude eight of the 26 counties from a substantial beef deal, on account of reporting BSE cases, was that 'the Russians have repartitioned Ireland'. A protocol excluding almost half the country demanded by Iran was refused.⁴⁷

Acting in their own economic interest, the Russians have obviously sought to exploit the BSE crisis to "talk down" the kilo

44 Ulster, with far fewer BSE cases proportionately than England and even Scotland, has had a computerised cattle tracing system in place for some time now. Eire is hoping to introduce such a system in the next year or so.

45 A Cork farmer has been charged with importing a BSE-infected cow into his herd. (Irish Times, 8 March 1997). In late 1996 the Irish Department of Agriculture warned of a gang travelling around the countryside selling a "BSE formula" to farmers. (Ibid. 28 Dec. 1996). Superintendent Duffy cited by Associated Press Cited at <http://www.nando.net/newsroom/nt/26rircow.html>).

46 Irish Times, 15 April, 6 June 1996.

47 Ibid. 7 June 1996.

price of their considerable imports of subsidised beef from the EU. As a result of the response to the crisis, EU intervention stocks of beef are rapidly increasing and Irish beef accounts for a large proportion of that going into cold storage. The Russians assume the EU will be desirous of relieving the pressure on available refrigeration capacity by means of subsidised exports. To "turn the screw" further, they announced in March 1997 that they were negotiating with Argentina for a substantial beef contract.⁴⁸ It is assumed that other than intervention stocks, perhaps destined for some "developing country", Irish beef from counties excluded from Russian contracts on account of what is deemed to unacceptable numbers of BSE cases will end up in Macdonald's outlets in Britain.

IV. Political Responses to BSE

There is more than a suspicion that a number of EU countries are not exactly looking for BSE cases (or for that matter human nvCJD victims). Some lack the veterinary resources to handle the situation and most vets, especially outside the UK, have limited experience in identifying the clinical symptoms of BSE. The early manifestations of BSE are quite similar to those of rabies - and other neurological disorders in cattle - which has long existed among livestock on the Continent. In part as a consequence farmers there have become accustomed, as in the foot-and-mouth disease (FMD) epizootics that have periodically swept across the Continent, to dispatch a beast to a slaughterhouse at the slightest sign of "trouble". Such "trouble" embraces not only behavioural problems in trying to milk a cow by hand or nowadays by machine. With rabies as with BSE, the milk yield declines. The response of dispatch to a slaughterhouse has historically been the preferred alternative for farmers to the expense of calling in a vet and perhaps learn that the entire herd must

48 Ibid. 17 Oct. 1996.

be slaughtered for inadequate compensation.⁴⁹

In March 1997 a report issued by the EC Agricultural Directorate (DGVI) on BSE efforts in member states, other than the UK and Portugal, apparently 'caused consternation in some, notably Germany, where officials are described as "apoplectic" at the criticisms'. The latter include the absence of uniform rules for detecting BSE (with local authorities issuing differing guidelines on the identification of the clinical symptoms of the disease and on the disposal of the carcasses); a lack of trained laboratory staff to analyse samples of tissue for BSE, with a high proportion of the samples being in a condition unfit for testing; and that cattle with symptoms "like rabies" may have entered the food chain.⁵⁰

It is notable that the eight cases of BSE so far discovered in Germany have all involved cattle of the Galloway breed imported from the UK. These are maintained by wealthy "hobby farmers", including among Frankfurt commuters living in the Elbtal in Hesse, as an attractive and a low maintenance breed (on account of their hardiness).⁵¹ Such "farmers" are more likely to call in vet at the slightest sign of sickness (in part on account of their value) than the typical Bauer.⁵²

49 Ibid. 17-2 Mar. 1997.

50 This is a common practice in the Netherlands where, remarkably, the first two BSE cases (involving cattle with no UK ancestry and born long after MBM exports from the UK ceased) were discovered in March 1997. (<http://www.airtime.co.uk/gosi3.htm>). In the second of these cases, for good measure, apart from 40 head of cattle a flock of 40 sheep on the farm was also culled and destroyed. (De Telegraaf, 8 April 1997). This action was taken even though there is no evidence whatsoever that scrapie in sheep can be transmitted to cattle simply by proximity. Scrapie-infected sheep and cattle have grazed the same pastures in the UK for centuries without a single instance being recorded.

51 Financial Times, 8 Mar. 1997.

52 Ibid. 24 Jan. 1997.

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Moreover, the German authorities have been extraordinarily diligent in their surveillance of the relatively limited number of imported cattle from the UK. (By contrast, with the large numbers of cattle maintained by "real" farmers, as the Minister of Agriculture of the state of Mecklenburg-Vorpommern - himself a vet - crudely but succinctly observed: "it is impossible to place a policeman behind the arse of every cow"). When a cow called "Cindy" appeared on the scene early in 1997, as the first ostensibly BSE-infected beast born in Germany, an enormous effort was expended to prove that "Cindy" was actually an import from the UK. It was eventually established with a degree of certainty, through DNA tests on surviving related beasts, that "Cindy" was actually "Scottish Queen" imported in 1989 from Scotland. In the process considerable deficiencies in the German method of tagging cattle for identification purposes were demonstrated.⁵³ CJD surveillance in Germany, as Der Spiegel observed, has as many holes in it as the brain of a BSE cow'.

The CJD reporting system instituted in Germany from 1 July 1994, when it became a notifiable disease, requires general practitioners to report suspected cases to the Robert Koch Institute in Berlin. No autopsy is involved, with a disease that is difficult to establish otherwise and difficult for GPs to distinguish on the basis of clinical symptoms from Alzheimer's, Parkinson's etc. The German notifiable diseases legislation, and that of other EU countries, is clearly ineffective and outdated. In the German case a sampling by the Federal health ministry in 1996 revealed that 90 per cent of syphilis and gonorrhoea cases are not reported by GPs, although there are clear guidelines that it is a requirement and substantial prospective fines for non-compliance. Smallpox remains a notifiable disease under

⁵³ Relatedly, it is somewhat inexplicable that not a single case of BSE has been found among the numerous beasts imported into southern Germany from Switzerland and maintained there before the order was issued in March 1997 to cull them.

the German legislation, although the World Health Organisation announced about a decade ago that it no longer exists on earth. The extremely rare disease psittacosis remains notifiable in Germany. It can be transmitted from a bird to a human but not from person to person. Yet a number of diseases, especially causes of food poisoning, are not notifiable.⁵⁴

The policy of culling the entire herd reporting a single BSE case, as in Germany, France, Eire and the Benelux countries, has been described as 'a giant public relations exercise', designed to assure the public that every effort was being taken to eradicate the disease.⁵⁵ There is more than a suspicion that the policy has been adopted in an effort to minimise the number of reported BSE cases.⁵⁶ In numerous British herds, where only BSE-infected beasts have been culled, others have subsequently exhibited the clinical symptoms. (In two UK instances, over several years, one farmer had 27 BSE cases in his herd and another 30).⁵⁷ It is also plausible that entire herd culling, where compensation is less than market value - as in most cases -

54 Die Welt, 11 Mar. 1997; taz-die tageszeitung, 11 Mar. 1997.

55 See Die Zeit, 17 May 1996.

56 Irish Times, 21 Mar. 1996. Less than a fortnight later the same newspaper pronounced the UK practice of only culling beasts showing signs of BSE to be 'false economy'. (Ibid. 1 April 1996). The German decision made early in 1997 to proceed to the culling of 5,500 beasts born in the UK or Switzerland has been described by the Nature Conservation Union (Naturschutzbund) of that country as a "senseless showpiece". (taz-die tageszeitung, 15 Mar. 1997).

57 From the early-19th century the eradication of all stock on a farm became the standard practice with the contagious diseases foot-and-mouth (cattle), swine fever (pigs) and Newcastle disease (poultry). However, with BSE there were reasonable grounds for the culling of only infected animals, as in the case of the policy adopted in the UK, as a means of investigating the disease. The agent of the disease is not conclusively known. The possibility of lateral transmission is largely discounted; although, as in the case of scrapie in sheep, it cannot be totally excluded. The possibility of cow to calf transmission only emerged in mid-1996. In spite of this, and against the advice of the EU Veterinary Committee from mid-1996, the countries involved have continued with the entire herd culling policy.

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may encourage (and perhaps be designed to encourage) farmers to slaughter and bury infected beasts on their farms.⁵⁸

Between 1985 and 1990 57,900 breeding cattle were exported live from the UK to other EU countries, including Germany (before certification was required that such exports came from BSE-free herds). On the basis of the UK data that should have produced at least 1,668 cases of BSE (apart from those arising from the considerable UK exports of MBM to the Continent that continued into 1990 - if the scrapie hypothesis is correct).⁵⁹ By mid-1996 only 413 cases had been reported and the great majority of those, outside Germany, had no connection with the UK through birth or antecedence.⁶⁰ As

58 Die Welt, 8 June 1995. cf. K. Dethlefs and N. Dohn, *Das BSE-Kartell* (Hamburg, 1996), where the UK (and Swiss) response of only culling beasts showing clinical symptoms of neurological disorder is considered part of a "conspiracy".

59 The UK decision from 1 April 1994 to reduce compensation for a BSE-infected beast from current average market value of beasts to that of a culled cow, at the end of its "milking life" and destined for petfood, or a beefburgers (?), has coincided with a sharp reduction in the number of reported BSE cases. It is assumed this is simply a correlation. The decision was taken on the ground that with evidence from early 1993 on a declining proportion of younger cattle, within an increasing total of BSE cases, farmers were on average being paid more than market value. (*Guardian*, 22 Mar. 1993; *Yorkshire Evening Post*, 22 Jan. 1994). In view of MAFF's "credibility problem", largely of its own creation, the suspicion might be aroused in some quarters that the measure was designed to reduce the number of reported BSE cases. On the one hand, with the requirement to remove SBO from slaughtered cattle, which added substantially to the cost of mechanical flesh removal for mince and petfood, the value of drafted old dairy cows was diminished even more than that of beef cattle in general. On the other, farmers - often with more knowledge of cattle than vets - were motivated to get "suspect" beasts to an abattoir before the "clinical" symptoms of BSE even appeared.

60 UK exports of MBM increased from 12,543 tonnes in 1989 to 25,005 in 1989 when the UK ban on feeding the material to cattle was announced. (*Tages-Anzeiger*, 7 Feb. 1997). Much went to the Continent. A remarkable fall in the price of MBM in Indonesia and other "developing countries" in the early 1990s may be due to the "flow on" effects of the decline in Europe with

breeding cattle the UK beasts exported live would not have entered the human food chain at an early age, other than if they began to show symptoms of a disorder. In addition, hundreds of thousands of calves were exported from the UK to the rest of the EU in the first half of the 1990s, especially to the Netherlands, before the ban was imposed in late March 1996. These were supposedly certified as from herds that had not reported cases of BSE (and were mostly - but not exclusively - destined for immediate slaughter). However, given the nature of the disease and other circumstances, such certification is not a guarantee of BSE-free status. Occasional prosecutions of vets and cattle dealers in the UK may represent the "tip of an iceberg" of illegal trading in such certificates.

MBM, the presumed source of BSE, is believed to have been widely fed to cattle in the UK after the 1988 prohibition. An unknown but believed to be substantial quantity of MBM from the UK continued to be exported to the Continent until 1990; and some thereafter illegally. The rest of the EU, other than the UK, banned MBM for cattle fodder in 1994. In the interim, however, it would seem

the BSE crisis, rather than shipments of MBM from the UK. (Die Welt, 26 Aug. 1996). As a potential source of BSE and nvCJD on the Continent an unknown quantity of British cattle arrived with the Republic of Ireland as the supposed origin. Early in 1995 UK customs officers began to notice the numerous cattle trucks arriving half-laden from Eire that were full by the time they reached Dover. (Sunday Times, 24 Mar. 1996). Otherwise, considerable numbers of calves continued to be exported live from the UK to the Continent. In response to the 20 March 1996 announcement by the UK government of a possible BSE-nvCJD link, the Netherlands ordered the immediate destruction of some 64,000 calves of UK origin and Belgium placed a quarantine on over 27,000. (Associated Press, 28 Mar. 1996, from http://www.nando.net/nt/328_rportcow.html). If there is a BSE-nvCJD link then this extensive UK export of calves, drawn mainly from dairy herds where the incidence of BSE is particularly high and mainly destined for the veal trade, ought plausibly to have produced more than the single nvCJD case reported so far on the Continent (and that not necessarily involving a consumer of UK beef).

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plausible that a not insignificant amount of MBM derived from the UK, either directly or through the processing of the offal from live cattle imports from that source, infected to an unknown extent with the BSE disease agent, must have entered the food chain on the Continent.

It is suggested, whether through conscious practice or ignorance, the true story of BSE has become obfuscated. The worst case in this respect is perhaps the Netherlands, where the first BSE cases were located as late as March 1997. The cattle have no connection with the UK - the semen (a suspected means of transmission of the disease in some "quarters") for one actually came from a German bull with an entirely German ancestry.⁶¹ MBM from the UK, even relabelled after the 1989 ban, must have long ceased to have provided fodder for Dutch cattle. We further note that while Switzerland and Ireland have reported an increased number of BSE cases after the 20 March 1996 announcement of a possible BSE-nvCJD link, France has reported only one (in April 1997).

In the UK (and Switzerland) a substantial proportion of beasts surrendered by farmers as suspected BSE cases have turned out to be suffering from other brain disorders (tumours, abscesses, listeria, hydrocephalus etc.).⁶² At the height of the epidemic in the UK the proportion of cattle in the latter category was around 15 per cent. As the number of BSE cases declined the proportion with other brain disorders increased to around 30 per cent. (Our suspicious nature is aroused by this correlation). In the rest of the EU, in those countries where BSE cases have been confirmed, the failure

61 Sunday Times, 2 June 1996.

62 Die Welt, 24 Mar. 1997. One of the 36 BSE cases reported by Portugal by late March 1996 involved a beat imported from the Netherlands. (<http://www.airtime.co.uk/bse/news2.htm>). In mid-1996 the German government extended the ban on UK cattle products to semen. (Times, 1 July 1996).

rate among suspected cases is zero.⁶³

V. The "Drama" of BSE

As with actual "epidemics" of lethal diseases, from the so-called Black Death of the mid-14th century to the AIDS phenomenon of recent times, it is the unknown about BSE and nvCJD that is the source of particular concern among the general public. In spite of some very recent developments, diagnosis of the disease remains difficult, other than by autopsy on the victim of a so far incurable disease.⁶⁴ Hypothesising has produced the prospect of a new disease agent - to add to bacteria, viruses and a retrovirus in the case of AIDS - in the form of the prion. There is uncertainty as to whether BSE-infected cattle, the presumed cause, have been removed from the food chain with a disease that has a long but undetermined gestation period. The announcement in mid-1996 that the infection could be passed from cow to calf questioned the effectiveness of the proposal to destroy all UK cattle older than 30 months. In this particular case, the outcome of an experiment, the most likely means by which the disease was passed on to the calf was through the womb or

63 The number of cattle succumbing to neurological diseases is at least 100 per million per annum. On that basis around 1,500 cases a year should have occurred among Germany's herd of about 15 million. However, only about 100 beasts a year are being examined for such disorders in that country. In Switzerland, among a dairy herd of about 770,000 - where BSE is most commonly found - around 150 a year are examined for neurological disorders. (taz, die tageszeitung, 24 June 1997). Belgium diagnosed 650 cases of nervous disorders in cattle in 1995. (Reuters, 26 Mar. 1996, from <http://www.nando.net/nt/326rbelcow.html>). The suspicion in the latter case is that if one is consciously not looking for BSE, a disease with clinical symptoms indistinguishable from many neurological disorders and can only be established as such by autopsy on the beast's brain (not performed), then one is unlikely to find BSE.

64 The Scotsman, 11 Nov. 1996. (Based on information from a committee of inquiry of the European Parliament on BSE).

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uterus of the cow.⁶⁵ Nevertheless, although the calves in question were not suckled by their dams, the announcement caused widespread concern that the "rogue" prion presumed responsible for nvCJD could be passed to humans through the consumption of dairy products.⁶⁶ Concern was also raised about semen from bulls, which had hitherto been considered similarly safe.

As in the case of earlier mysterious diseases the "unknown" about BSE and about the possible link with nvCJD has permitted "horrorscopes" to acquire credibility among the general public.⁶⁷ They include the prognostication of the microbiologist Richard Lacey of Leeds University that up to half a million people in Britain could die of nvCJD by the millenium.⁶⁸ At what was perhaps the height

65 The team headed by John Collinge at Imperial College/St Mary's Hospital in London reported the discovery of the prion presumed responsible for BSE in the spongified brain of deceased sufferers from nvCJD. (Nature, October 1996, pp. 685-90). Subsequently they found the prion in a tonsil sample from a victim. This has suggested a relatively simple test for early evidence of the disease in humans. (Lancet, Vol. 349, 1997; Times, 10 January 1996). However, given the long and so far unknown typical gestation period involved before the manifestation of symptoms, this would involve testing the entire non-vegetarian section of the population for evidence of the existence of a disease for which there is no known cure. It would also amount to a sentence of death being pronounced on those with the prion in their tonsils, at a time when the BSE-nvCJD relationship is still not completely proven.

66 Irish Times, 3 August 1996. The news of course raised the possibility of women nvCJD sufferers passing the disease on to their children; especially with cases being concentrated in the child-bearing age category. (Times, 2 Aug. 1996).

67 The German state of North-Rhine Westphalia called for an immediate ban on all UK dairy produce. (Christian Science Monitor, 22 Aug. 1996). Milk does not contain cells and, therefore, should not be a means of transmission of the prion assumed responsible for BSE. However, a significant proportion of dairy cattle have mastitis (up to nearly a third) and, while they are not supposed to be milked in that condition, it is possible that some are. In that case mastitis cells, possibly with the prion, could pass into the milk supply and would not be eliminated in processing (pasteurisation etc.).

68 There is as yet no "scientific" proof that BSE is derived from "scrapie" in

of the BSE scare in March 1996 the opinion of another British microbiologist, Stephen Dealler, that 10 million people in Britain could die of nvCJD by 2010, received press attention.⁶⁹ The view of Paul Brown - apparently a "world respected" expert on CJD - that the new variant could be passed on through blood transfusions and the medical use of human blood derivatives, also received press attention, in the light of reported inadequacies in the screening of blood donations for HIV infection. Brown "calculated" that a single nvCJD sufferer who made a 100 blood donations could infect 10,000 people with the disease.⁷⁰

A striking difference between the Black Death and modern "plagues", such as AIDs and BSE-nvCJD, is that statistical modellers have replaced prognostications on the basis of biblical exegesis as harbingers of doom. The readiness of some scientists/statisticians to make alarmist prognostications as to the possible future incidence of nvCJD, on the basis of very little "hard evidence", has to be set within the context of a press ever ready to exploit "worst case sce-

sheep and is transmissible to humans as the cause of nvCJD. A suggestion that has some support in scientific quarters is that the source of BSE is organochlorines used as pesticides (in particular fluoroacetamide) and perhaps organophosphates. To some extent support for this theory is derived from an incident at Smarden in Kent in 1963 when a factory producing organochlorines accidentally contaminated a couple of acres of farmland. This resulted in the death of a herd of cattle, dozens of sheep, dogs, cats and wildlife in the area, before 2,000 tons of topsoil were removed and dumped into the Atlantic. Subsequently, a cluster of cancers in humans developed in the area and five deaths from the rare disease then simply known as CJD. In 1985 the first reported case of BSE occurred in the Smarden area of Kent and that county went on to record a more than average incidence of BSE. To extend the theory further, it is suggested that semen from bulls in that area could have been passed on to cattle elsewhere through artificial insemination. MAFF denies any link between pesticides and BSE. (The Scotsman, 10 May 1996).

69 Professor Lacey is also seemingly a vegetarian. See his contributions to *The Vegetarian*, February and Autumn 1993.

70 Irish Times, 28 Dec. 1996.

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narios" to sell their product.

To an extent public concern about BSE and nvCJD is a creation of the popular press; although of course large sections of the public had to be receptive to such exploitation.⁷¹ We suspect that several newspapers have consciously endeavoured to maintain public awareness of the matter, by means of "filler" stories, in periods when no news of real relevance on the issues has been available. These items include occasional reports of a death from CJD, or the figure for a locality in a period of time, with the disclaimer that no evidence exists of a link with BSE (in these cases of sporadic cases of sporadic and genetic CJD) serving to remind of the possibility.⁷²

The efforts of the popular press have been aided by the most well-known organs for the publication of the results of scientific research. In the UK, for example, the leading journals *Nature* and *Science* issue press releases on forthcoming articles deemed to be likely to attract attention to the journals, which are the only source of information consulted by most journalists working for the dailies. The result is that any item published in these journals accompanied by a press release (or in *Lancet* and the *British Medical Journal* which are similarly in competition in the medical field) is considered as important and representing scientific "truth".⁷³

71 <http://www.dr.de/TV/bse/>

72 For one of the most outstanding examples of sensationalist journalism on the issue, see Peter Martin's contribution, "The Mad Cow Deceit - Fourth Teenager is Killed by CJD", in the *Daily Express*, 16 Feb. 1996. Among other things, this article intimates at a conspiracy by government and its scientific advisers, in respect of the burial arrangements for nvCJD victims. Apparently they were buried in closed coffins. In a Belfast case, it seems, the grave was dug to a depth of 9 rather than the usual six feet and lined with lime, with the sextons being issued 'protective clothing and surgical gloves' (presumably also ladders).

73 See, for example, *Berliner Zeitung*, 19 April 1997, for a report (in a quiet period on the "BSE front") of 8 deaths from CJD in Brandenburg since 1995, none having 'contact with BSE-endangered cattle'. In part perhaps to counter

VI. BSE and Public Opinion

Understandably in the circumstances, the BSE crisis has considerably increased public suspicion of national governments and their agencies - and for that matter of the EC and "scientists". This is not only true of the UK, where from 1986 the government reaction has been consistently to play down the extent of the crisis and has limited access to information for independent scientists.⁷⁴ A widespread view is that a ministry such as that for agriculture and food (MAFF in the UK, which is replicated in other member states of the EU) is an oxymoron. The situation has been represented as one of "agency capture", where ministries established to exercise control over specific areas of economic interest, farming in this case, become in effect the servants of the "lobbies" involved.⁷⁵ One outcome of the BSE crisis, combined with outbreaks of food poisoning of seemingly increasing frequency, has been pressure to separate the agencies representing the food interests of consumers and those of agriculture. It remains to be seen whether this direction will result in effective food control agencies.

Concern about BSE and the possible nvCJD link reflects a wider unease about existence in modern industrial-urban societies. As Pat Upton, a biochemist and Irish Labour MP has observed: 'The fear of ghosts and goblins has been replaced by a fear of technol-

this, from January 1997 the Irish Department of Agriculture moved in January 1997 from issuing news of reported BSE cases as they occurred to announcing monthly figures.

⁷⁴ Financial Times, 23 April 1997. Agriculture is also the main stumbling block to the eastward expansion of the EU. Treaty negotiations with Poland and the Baltic states almost broke down over the issue of potatoes. (taz, die tageszeitung, 6 May 1997). The prospect of eastern European farmers getting access to CAP funds is a sweet dream for them but a western European nightmare.

⁷⁵ See Jon Turney in the Guardian, 16 April 1997.

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ogy'.⁷⁶ This applies in particular to food processing from the farm to the supermarket. Unlike our hunter-gatherer forebears, and those of most of the neolithic era, the consumers of "modern times" do not directly obtain, prepare or increasingly even cook (other than in a microwave oven) their own food. Food processing is conducted in "invisible" premises over which consumers have only indirect, and increasingly what appears to be inadequate, control through officials appointed by governments. (It is noticeable that "beefburgers" etc. have become the particular source of suspicion in the popular press as the means of contracting nvCJD). The official response to the BSE crisis seems to indicate that ministries responsible for food and agriculture, such as MAFF in the UK, have acted primarily in the interests of food producers rather than food consumers. Here public concern over BSE has been enhanced by numerous "food scandals", involving revelations about potentially lethal farm and slaughter-house practices and outbreaks of food poisoning.

Perhaps more significantly the "threats" emanating from farming, which the BSE crisis epitomises, contradict the image of the countryside inherited by the majority of the population in what are now overwhelmingly urban societies. During the process of urbanisation in Europe, which involved adjustment to and mitigation of considerable pollution, town dwellers created an image of Arcadia. In more recent times the countryside has emerged as a threat to urban dwellers, in particular to the necessities that sustain life. There is a serious problem of "run-off" of residues from artificial fertilisers, pesticides and herbicides entering the drinking

76 William Rees-Mogg, *Times*, 13 Mar. 1997. This view is somewhat simplistic from a historical perspective. As a result of two world wars and a "food crisis" in Europe lasting into the 1950s, the primary orientation of agriculture ministries came to be the maximisation of food output at minimal economic cost to consumers. This necessitated collaboration with and subsidisation of producers to an extent that has had an enduring impact to this day.

water supply. Residues of organophosphate pesticides have reached such high levels that people are advised to peel "the apple a day that keeps the doctor away", at least for children. On many occasions residue levels of antibiotics and growth hormones have reached dangerous levels. In these cases no direct connection has been established, and perhaps cannot be established, as to the actual cause of death of people. Then along comes BSE, with a possible relationship to a new and specific terminal disease in human beings with a long, unknown gestation period, involving an as yet not definitely identified disease agent.

VII. The BSE Crisis and the Common Agricultural Policy

Arguably but for the Common Agricultural Policy adopted by the EU, and the similar policy in place in Switzerland, the BSE crisis would never have eventuated. Through a system of controlled subsidies (accounting for over half the EU budget) farmers have been encouraged to maximise output at minimal cost in order to realise not inconsiderable profits. To that end they were naturally motivated to resort to meat and bone meal (MBM) as cheap high-protein fodder derived from the offal of slaughtered livestock. This was the means by which the offal of scrapie-infected sheep, the presumed origin of BSE, came to be fed to cattle - and the latter consumed the remains of BSE-infected cattle.

The intensive farming engendered by CAP to produce food at the lowest possible cost (within a high-cost regime for consumers in the EU) encouraged other practices that posed a health risk. With cattle and pigs crowded into stalls, the likelihood of the spread of diseases was considerably enhanced. So stock came to be regularly injected with antibiotics to reduce that risk. The traces remaining in meat reduce the effectiveness of antibiotics in countering bacterial diseases in humans. Growth hormones, including carcinogens such

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as clenbuterol, were fed to stock to increase weight gain. These sorts of practices were outlawed in the EU from the late 1980s. However, the widespread illegal use is known to continue.

Part of the explanation for the particularly high incidence of BSE in the UK is perhaps historical, dating back to before 1973 when the UK joined the then Common Market (EEC), in that farming was already relatively intensive in that country before CAP provided an added incentive to resort to cheap MBM and other means of increasing livestock productivity.⁷⁷

The BSE crisis has occurred at a critical time in the process of European integration. That it produced a "knee-jerk" reaction based on the defence of national interests reflects the stage at which the EU is "at". Every member seeks to promote its own perceived national interests in a context of its diminishing (or never acquired) significance in a process of global integration. The BSE crisis has illustrated that the European Union continues to be perceived by member states of the EU as a mechanism for pursuing national pecuniary advantage. This applies especially in respect of the massive funds allocated to the Common Agricultural Policy.⁷⁸ Every member state (and its farmers) is motivated to "claw back" as much - and hopefully more - than it contributed.⁷⁹ In the meantime, the export subsidies required to dispose of intervention stocks of foodstuffs experiencing diminishing per capita consumption in Europe is having a devastating effect on farmers in the developing country recipients. After a promising start, with the Uruguay Round, the World Trade Organisation seems to be "losing the plot". Perhaps the BSE crisis, and the

77 Cited in Irish Times, 14 Aug. 1996.

78 Irish Times, 26 Mar. 1996

79 'No other country has been afflicted by mad cow disease as Britain has because none took the risks Britain did - in the name of efficient modern farming, cheap food and maximised profits'. In the circumstances this statement is more that a little disingenuous.

prospective "meat mountains" it is creating (along with an increasing incidence of E. coli in Europe) will eventually create a climate within the EU where a fundamental reform of the Common Agricultural Policy is feasible. Currently the drift of EC proposals to reform the CAP, in part in response to the outcome of the Uruguay Round and expected further world agricultural trade talks, (and the prospect of hundreds of thousands of farmers in the prospective EU members in Eastern Europe eager to join in exploiting the "milch cow") is to shift the basis of agricultural subsidies from price maintenance (through intervention) to income support for farmers. For example, it is proposed to pay dairy farmers so much per cow they maintain, with individual governments being left to decide the maximum headage per farmer. This will be problematic for various reasons. It involves equity issues within the farming community. It will force politicians to make decisions that are likely to alienate sections of their powerful agriculture lobbies, especially large farmers in the cereals and beef sectors. For farmers in general it will make transparent the extent to which they are "welfare recipients" with no right to criticise "dole bludgers" etc. In the longer term the proposed direction of subsidising farm incomes rather than produce prices is likely to become an issue in world trade negotiations.

However, there seems to be little choice. Prospectively, as the EC concedes under the current price support system, the grain surplus is likely to rise from the current 2.7 to 58 million tonnes by 2005. The 18,000 tonnes of beef in intervention stocks in early 1997 - restricted through large-scale "dumping" in the developing world - is expected to reach 11.5 million tonnes by 2005.⁸⁰ That is unless sanity prevails and the CAP is radically reformed.

In the late 1970s the EU provided finance from its regional funds to improve cowsheds and milking equipment in southern Italy

⁸⁰ These funds include a considerable subsidy for the cultivation of tobacco.

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to raise productivity and farm incomes. In 1984, with those who responded having accumulated a considerable debt in the form of the new cowshed, the Agriculture Directorate of the EC introduced milk quotas (Directive 876) in an effort to reduce the oversupply. These were based on reported output per farm in 1993. Most Italian farmers gave minimal figures because they thought the action had to do with some new tax the politicians in Rome were contemplating. They now have to comply with lower than necessary quotas and the debt on new cowsheds that cannot be used to maximum capacity. (taz, die tageszeitung, 6 May 1997). The contradiction between CAP and funds allocated by environmental protection agencies in the EU is a "story in itself".

