

Essay Award Winner 2000-2001

Department of Sociology at King's University College

Sociology 405G

Final Paper

**Foot and Mouth Disease in the United Kingdom:
A Result of Technical Rationality?**

by Samantha Pearson*

* The Sociology department is re-introducing its Sociology Essay Contest this year. This is an example of a past winning "final paper" written by Samantha Pearson in 2001. The Department of Sociology at King's University College gives an award for the best essay submitted. The essay must have been part of the requirement for a sociology course at KUC during the Fall and Winter term. The essay should be submitted to the Departmental Secretary by April 30. It should be in the form of a hard copy without marks or comments from the course instructor but including the cover with all the relevant information on the original paper, along with a digital version on a floppy disk or CD. The submitted essays will be judged by a committee consisting of three members of the Department. The name of the winner will be sent to the Departmental Chair by July 1. The winning essay will be posted to the Departmental Web Site by the beginning of classes in the Fall, and will also be linked to the Sociology Newsletter in the first fall issue.

Deadline: April 30th, 2005, to be submitted to Sandy Anderson, Sociology Department

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Final Paper

**Foot and Mouth Disease in the United Kingdom:
A Result of Technical Rationality?**

Submitted for: Dr. D. MacGregor

Submitted by: Samantha Pearson

Due: April 03, 2001

Introduction

March 2001 - Foot and Mouth Disease in spreading across Europe. In Britain the countryside has been closed to ramblers, tourist bookings from the US have dropped by thirty percent and cancellations of holidays already booked are on the rise. Municipal elections and school exams may be delayed and farmers are put under suicide watch and their guns have been confiscated (BBC News Online 2001). Globalization and the complexity of trade regulations and economic systems have resulted in unintended consequences whose impact on farmers and consumers alike is far-reaching and tragic. What follows is a discussion of what Adams and Balfour (1998) call "administrative evil", as well as the bureaucracy that has resulted in the needless slaughter of thousands, potentially millions of healthy animals in the name of trade relations.

One of the key features of administrative evil is its "masked" quality, which makes it difficult to tease through the tangle of bureaucratic language, and non-democratic, unaccountable power structures, and focus on and identify the root causes of the current crisis. This paper will argue that technical rationality is not only at work in how Britain is dealing with the outbreak of Foot and Mouth Disease but in the outbreak occurring at all. Characteristics of modernity giving rise to administrative evil (Adams and Balfour 1998), will also be examined in light of the Foot and Mouth Disease outbreak in Europe.

The Outbreak

On February 19, 2001, the first case of Foot and Mouth Disease (FMD) in the UK since 1967 was confirmed, discovered in pigs at an abattoir in Brentwood, Essex. On

February 23, 2001, the UK government halted exports of dairy products, meat and livestock (The Economist Online 2001). This four day delay before action was taken may well have made the difference between containment of the disease and its current spread across the UK and into France, Germany and the Netherlands. It is has been reported that the disease, the O-serotype Pan Asian strain, was brought into the country by way of smuggled meat (BBC News Online 2001). This theory was replaced by one involving feeding illegal pig swill to swine at the farm where the outbreak started. As of March 28, 2001, 716 cases have been confirmed in the UK with the expected number of cases expected to reach over 4,400.

Foot and Mouth Disease is highly contagious, a picornavirus that affects cloven hoofed animals such as goats, sheep, cows, and pigs. It does not affect horses, poultry or domestic animals such as cats and dogs, although the virus can be carried from one location to another by these animals. While it may on rare occasion be contracted by humans through open wounds or by ingesting infected milk products (one such case was reported during the 1967 outbreak) symptoms are mild and the disease is not considered a public health risk. Hand, Foot and Mouth Disease in humans is an unrelated illness to the disease under discussion (Centre for Policy Research on Science and Technology –CPROST 2001).

Early symptoms of the disease such as decreased food consumption, fever, depressed behaviour, lameness (in pigs) and sudden drop in milk yield (in cows), are common symptoms for a variety of ailments, making early diagnosis difficult, especially in areas that have been FMD free for some years. The most notable symptoms occur at a later stage of the disease: fluid filled blisters called vesicles appear around the

mouth and snout area, above the hooves, and on the teats. The vesicles burst, leaving open sores that often lead to secondary infections, particularly if the animal is kept in crowded or dirty conditions (The Pig Site). While the infection rate is often 100%, mortality ranges from 5% in adults to 75% in suckling pigs (CPROST). In other words, it is particularly dangerous for the young, old and weak, similar to influenza in humans. Although there may be some weight loss and reduction in milk production for up to 18 months, most animals recover in two to three weeks.

The virus can be spread by direct contact, or be carried by people or objects that have picked the virus up from an infected area. It can also be carried on the wind. The Pig Site states that "(I)n humid, overcast weather with a steady light wind blowing over flat country, infective virus may survive long enough to infect other herds up to 60 km (36) miles distant. Over water, given the same climatic conditions, infective virus has been able to travel up to 300 km (180 miles)." This last fact will have bearing on a discussion of vaccination versus culling as a possible method of bringing about an end to this crisis.

Foot and Mouth Disease is found in several countries around the world and is actually endemic in some, although it has been eradicated in many others (CPROST 2001, The Pig Site 2001); the last case of FMD in Canada was 1952, and in the US was 1929 (CPROST 2001). There have been recent outbreaks in Argentina, although of a different serotype than that in Europe and cattle farmers there have requested permission to vaccinate their herds. Figure 1, 'FMD Outbreaks 2000' (Food and Agriculture Organization of The United Nations – FAO 2001) shows in pink those countries that reported FMD outbreaks in 2000. Entire countries are indicated, although

this does not reflect the number or precise location(s) of outbreaks. It is interesting to note that those countries showing as "disease free" (in green) are predominantly western countries that tend to be large agricultural producers or alternatively oil producing nations. It raises the question of whether insisting on a disease free status is an artificial trade barrier to poorer, southern nations being able to export their meat products.

Those countries shown in red have FMD present and generally use a regime of vaccination to deal with the problem (FAO 2001). While routine follow up vaccination is required, and it is not possible to tell the difference between a vaccinated animal and an infected one, it is a system that works. Meat from vaccinated animals is not harmful to humans (BBC News Online 2001). If there is an effective vaccine option available why is culling and slaughter the proposed solution to the European FMD outbreak?

The EU, Trade Policies and CAP

To answer this question, and begin to try and unmask administrative evil at work, we begin with an examination of the administration governing trade policies and agricultural policies for Great Britain, the European Union (EU). Originally formed by the Treaty of Rome in 1957, the Common Market consisted of Germany, France, Italy, Belgium, Luxembourg, and the Netherlands; Britain became a member in 1973 (European Union FAQ). The Treaty of Rome was unique as it formed a Union of countries where the constituents were no longer necessarily sovereign states and the Union could make decisions binding on all member states and its citizens. The Maastricht Treaty of 1992 "established the European Union in its current form" with the

concepts of European Citizenship and a common currency. The Amsterdam Treaty of 1998 established the European Union "as a legal entity in its own right, capable of acting as a *single* entity in international affairs" (emphasis added). Essentially, the EU could engage in trade negotiations or sign treaties on behalf of itself and these actions would be binding on all member nations. From 1957 until the present there has been a continued and sustained development of a bureaucratic structure that has become increasingly distant from the elements of democratic representation and accountability that are considered to be the mark of elected governments.

The Common Agricultural Policy (CAP) is the EU's policy on farming and agricultural production. Its original aims were to harmonize policy and standards of food production, ensuring a safe, available supply of food for consumers. Recent research shows, however, that people would like the CAP to focus more on food safety and environmentally considerate methods of production (CPROST 2001). A key feature of the CAP is subsidies supplied to farmers in an effort to "provide efficient farmers" with incomes similar to those of people working in the industrial sector (Meat and Livestock Commission). The CAP has been criticized for many years as being in need of drastic reform, but it has been said that CAP minor reform only comes about as a result of internal forces, rather than external ones.

"... the sealed off policy community that makes decisions on the CAP tends to produce only incremental reforms, often associated with side payments to satisfy member states who feel they have lost out. The decision-making process in an intergovernmental one, driven by national ministers of agriculture who generally have a clientistic relationship with their national farmers' unions." (Grant 2001).

The CAP used to consume 66% of the EU budget, although this figure has been reduced to 46%. It is argued that market subsidies produce unnecessary surpluses

(e.g., the butter mountains and wine lakes of the 1980s) as well as hindering farmers for competing naturally on the open market. The result has been higher prices for the consumer and practices such as intensive or factory farming (Grant 2001), which may have had a direct impact on the spread of FMD in Britain and into Europe.

The most notable push for reform of the CAP is from Germany where Chancellor Schroeder has appointed Green Party ecologist Renate Kuenast as Minister of Farming and Food Safety (Grant 2001; Spicer 2001). Bovine Spongiform Encephalopathy (BSE) was diagnosed in Germany last year and it has been suggested that Germany, who contributes the most to the CAP, may want greater input into how it is run. Renate Kuenast is in favour of abandoning intensive farming methods that increase production, and wants to focus more on food quality and standards. One feature of her proposed reforms is to stop paying subsidies for production and pay farmers a salary "to be custodians of the land."

Modernity, Administrative Evil and Resistance

Adams and Balfour (1998) discuss how features of modernity facilitate the rise of administrative evil and enhance its "masked" quality. In the current FMD crisis we can see many of these characteristics at work. The idea of the modern age began in the 1500s with the notion that man was in charge of his own destiny, that he had the power to direct events influencing his life. It was an age of scientific discovery and change, and as science progressed, the pace of change increased, as did the scope of human influence, and we have now reached a point where it almost unthinkable that there is anything we could not change or control, given enough money and resources. It is a

way of thinking now driven by the capitalist ideal of profit and productivity (Pomfret 2000-2001), and has contributed to the current situation in Europe.

The EU, through CAP, subsidizes its farmers to be as productive as possible while maintaining the lowest production costs possible (BBC Online 2001; Compassion in World Farming, 2001). The result has been a complete shift away from traditional farming methods to intensive, or factory farming, with huge herds of livestock, often kept in close quarters where disease is more easily spread. To increase efficiency and enforce new, Europe-wide safety standards, abattoirs were put under very strict regulations that were expensive to maintain. Only by processing greater numbers of animals would it be cost effective to run abattoirs as a business. Small local abattoirs went out of business and Britain was left with three, large, abattoirs to service the whole country. The result was widespread movement of live animals around the country and around Europe. For example, an abattoir in France takes advantage of a different maturing season for British sheep and buys them to slaughter after the local season for mature sheep is over, thereby staying at full production all year round.

Other regulations have also encouraged the widespread movement of live animals (BBC Online 2001). The Netherlands exports live piglets to other countries to raise because of local environmental regulations restricting the production of pig slurry. Ireland exports live cattle because it doesn't have enough grazing land to support the number that they produce (in response to the subsidies available for that production). There have been reports that there is unnecessary movement of sheep by farmers "renting them in" to increase herd numbers for inspections that determine subsidies (based on the number of sheep in the herd).

The European outbreak of FMD is an unintended consequence of the application of the philosophy of technical rationality to agricultural policy. Another example of this would be the emergence of CJD, the human variant of BSE, which resulted from cattle eating feed containing the carcasses of sheep infected with a disease called scrapie¹. While FMD has always been a danger, in earlier times it was more easily contained. Herds were smaller and movement of animals was usually limited to the immediate area, going no further than the local abattoir.

Ulrich Beck's theory of Risk Society (1992) could easily be applied to the current FMD crisis. Beck maintained that we now live in a period of shared risk from the unintended consequences of human actions and that the scope of these effects is not only geographical, crossing boundaries and vast areas, but temporal, affecting not only ourselves, but future generations. For example it is only now becoming apparent to scientists that the number of people affected by CJD may be in the tens of thousands. Foot and Mouth Disease in Britain may have come from meat smuggled from Asia, or from pig swill made from unused airline food. A current outbreak of FMD in South Africa is suspected to have started when infected slurry, dumped from a passing ship, was washed ashore. It is not only farmers that are affected: tourism in Britain has been hard-hit, students' exams are in jeopardy because they are unable to attend classes, and British municipal elections and the national census may be delayed (BBC Online).

One aspect of administrative evil that is difficult to grasp is that, ultimately, evil acts are perpetrated by people acting individually but whose actions have a collective result. Hannah Arendt's concept of "the banality of evil" (1963) suggests that ordinary people will do evil things given the right circumstances. At the time her work on

Eichmann's trial was published, Stanley Milgram (1963) was reporting results from his obedience studies, scientifically demonstrating the same concept. Ordinary people will do extraordinarily evil things when they feel they are subject to a legitimate authority. Both Arendt and Milgram appeared to be saying that the behaviour is not innately evil (Miller 1995). This highlighted the idea of fundamental attribution error, that is, people's tendency to attribute a person's actions to that person's traits and preferences rather than to the situation in which they find themselves.

Milgram (1974) theorized two major concepts: *agentic shift* and *binding* (Miller et al 1995; Modigliani and Rochat 1995; Lutsky 1995). Binding occurs when we first agree to smaller, less stressful acts. As the level of compliance required becomes distressing and conflictual (cognitive dissonance), a psychological process occurs where we rationalize our behaviour, justifying the previous acts to ourself, rendering further acts acceptable. This demonstrates the Foot-In-The-Door Effect (Freedman and Fraser, 1966; Gorassini and Olsen 1995) where agreeing to a smaller request leaves a person more likely to agree to a more arduous one. Self-perception is changed and we consider ourselves to be the kind of person who does, indeed, do these types of acts.

Agentic shift is passing off of responsibility to the authority figure, so we are "only following orders." Milgram's experiments involved having the subject, or 'teacher', administer progressively stronger electric shocks to a 'learner' under the guise of a learning experiment. The experimenters were surprised to discover the lengths to which subjects would comply with orders to do this even when it was apparent to the teacher that the learner was in physical distress and asking to be released (Elms 1995). Similarly a farming and veterinarian community that begins a cull to halt a disease may

see that cull turn into the wholesale slaughter of healthy livestock and still participate. How easy is it to say that having gone so far, they must continue?

Modernity has resulted in a diffusion of responsibilities (Adams and Balfour 1998) and a situation where the world has become so complex that individuals have little choice but to rely on scientific experts (Beck 1992; Ali 1997), a situation that facilitates agentic shift. Roles have become specialized and different individuals or groups work on different aspects of a project knowing that someone else higher up will be responsible for assembling the whole (Gawthorpe 1997). The veterinary community is carrying out one small piece of an overall policy that is linked with international trade, world economics and politics. Within their roles they are doing a 'good thing' and doing it to the best of their ability.

An alternative, and perhaps more hopeful, approach to this top-down view of influence is discussed in theories of the effect of individual action on societal situations. Both Lewin (1998) and Aberg (2000) point out the unpredictability of the effect of individual collective action; however, they do agree that individual action can and does affect the behaviour of larger groups. Lewin (1998) discusses public choice theory in terms of politics and proposes that researchers often neglect rational choice issues when interpreting their data for the purposes of predicting public opinion or action. Additionally while politics may be seen as a reflection of the status quo, Lewin believes that those in political power can represent an opposition to the status quo. As a case in point, Prime Minister Blair may be facing a situation where he will have to change his current policy on vaccination, in opposition to EU desires, because public opinion is now moving toward that stance (BBC News Online 2001). Britain is facing nationwide

municipal elections in May and if the British public begin to feel that the ban on vaccination is "yet another irrational demand from the EU", New Labour may not fare well with the voters.

Aberg's (2000) model examines the phenomenon by which an individual's actions are influenced by other individuals' actions, such as occurred in Milgram's experimental condition 17, "Two Peers Rebel". In particular, Aberg looked at membership in Unions and joining social movements. If there are a hundred people in a group and one person disagrees, then, perhaps, two more people will also disagree. If there are three people that disagree, then, perhaps, five more will also disagree (or agree), and so on.

As well as looking at why people submit to authority, an examination of administrative evil must consider what other elements can result in resistance to authority, under what circumstances people perpetrate evil acts and under what circumstances do they not (Kelman and Hamilton 1989). Milgram's studies reveal several conditions under which people resist authority. The most notable was the previously mentioned Peer Dissent condition. Proximity also had a direct effect; the further the learner was from the teacher (i.e., in the same room, in a different room), the longer it takes the teacher to call a halt to giving shocks. A lack of empathy makes it easier to carry out acts against another. Similarly, the further away the experimenter was from the teacher (i.e., in the same room, in a different room, in a different building) the sooner the teacher would stop giving shocks to the learner. It is more difficult to have a diffusion of responsibility or have a shift in responsibility if the authority figure is further away or seems less of a threat.

Rochat and Modigliani's research (1995) about people who assisted the Jews during the Holocaust produced their concept of "ordinary goodness." A major criticism of the banality of evil premise was the implication that the individual could abdicate responsibility for actions, in essence be a victim of the situation. Ordinary goodness refers to the actions of individuals in spite of the circumstances. They compare the people from the region of Le Chambon in France, and their resistance to Vichy government decrees about harbouring Jews, with Milgram's experimental subjects. Several consistent characteristics are highlighted. Immediacy of resistance is critical (Katz 1993; Milgram 1974; Rochat and Modigliani 1995); if resistance is immediate it avoids a situation where rationalization and self-justification occur, making further obedience more likely. A delay in retaliation further reinforces resistance by diminishing the appearance of power and control held by the authority figure. Maintaining the initiative established by the initial resistance was the final phase of successful resistance.

Vaccination vs. Culling

Returning to the current situation, why must healthy animals be slaughtered? An effective vaccine exists and many countries use it. The EU has now given the Netherlands permission to use it on a limited basis to help stop the spread of the disease with the rationale that it is acceptable if the resources are not available to conduct a cull, that is, get the carcasses burned in a timely fashion (BBC News Online 2001). Is this another case of technical rationality resulting in goal displacement? There are several, valid arguments against the vaccine, most related to maintaining a

disease free status and the length of time it will take to regain that status if vaccines are used. The expense of the vaccine is also cited.

The EU decided in 1991 that for trade purposes, it would no longer allow vaccination for FMD; "disease free" status was required in order to trade successfully with other nations. So vaccinations were stopped and herds became vulnerable (Compassion in World Farming 2001). In Britain, the disease has struck, spread and now must be stopped. Initially infected animals, and any animals they had come in contact with, were slaughtered, and all movement of livestock was halted. Farms were quarantined and disinfectant pads set up on local roads to and from farms. The public footpaths were closed, free movement around the countryside stopped. The National Trust and English Heritage closed all attractions outside of major urban centres. The disease continued to spread, and confirmed cases in Britain have exceeded 700. The Ministry of Agriculture and Fisheries (MAFF) has announced that a massive cull will be conducted and plans to slaughter nearly half a million animals are underway, all livestock within a two mile radius of infected animals. England's Chief Vet, Jim Scudamore, in a report issued March 23, 2001, (BBC News Online 2001), estimates an eventual total of 4,400 cases and the need to cull fully half of Britains livestock, over 30 million animals.

There are compelling arguments for the use of the vaccine (BBC Online; Compassion in World Farming). Most livestock will recover from FMD (recall that 5% of adults to 75% of sucking pigs and sheep will not survive). Humans cannot contract FMD through consuming infected meat so even if it is not tradable on the open market, there is nothing to prevent British farmers from supplying their own country with meat.

Given the global nature of not only farming, but movement of peoples, goods and vehicles around the world, it is unrealistic to expect to effectively enforce movement bans. Already it has been revealed that a livestock dealer in France sold on sheep that had been in contact with contaminated livestock (BBC News Online 2001). And if movement around the countryside is stopped, who can stop the wind? And how will the carcasses of all these animals be destroyed? Even with the aid of the military, the logistics of such a task are unthinkable. What unintended consequences will result from putting the burnt remains of these animals in the air or the buried remains in the ground. There is no proof that culling will eradicate the disease, other than by eradicating the animals that host to it. What is the goal? To remain acceptably "disease free" and be permitted to trade on world markets? As a colleague recently wrote, "The whole thing is a nightmare and completely irrational. We can't get it, they don't die from it! Vaccination works! It's World economics gone mad" (McGrath 2001).

As of March 27, 2001, the plans to cull are still in place, although there appears to be a sea change occurring in British public opinion. Prime Minister Blair is listening; he has begun to hint that vaccination may have to be considered, "As you track the disease and see how it spreads, things that may have seemed utterly unpalatable a short time ago, have to be on the agenda" (BBC News Online 2001). Let us hope that this is a situation where Arberg's model would predict the success of the vaccination support lobby.

Figure 1: FMD Outbreaks 2000

Source: Food and Agriculture Organization of The United Nations

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-vaccine

low/english/uk/newsid_12290000/1229910.stm

-disease entered through import

-reduction in number of slaughter houses

-suicide

hi/english/world/europe/newsid_1220000/1220475.stm

-tourism down

low/english/uk/newsid_1219000/1219322.stm

-intensive farming

http://newsvote.bbc.co.uk/hi/english...ng_point/newsid_1190000/1190582.stm

-origins

hi/english/st...epth/uk/2001/foot_mouth/trail/1.stm

-public opinion

newsvote.bb.co.uk/low/engli...ng_point/newsid_1227000/1227938.stm

-military, cull

low/english/uk/newsid_123000/1230638.stm

-cull

low/english/uk/newsid_1229000/1229225.stm

-cull

hi/english/uk/newsid_1226000/1226520

-trade impact

low/english/world/europe/newsid_1226000/1226559.stm

-tourism, trade, cull

hi/english/uk/newsid_1225000/1225675.stm

-FMD in Saudi Arabia

low/english/w...die_east/newsid_1221000/1221454.stm

-trade

low/english/world.europe/newsid_1220000/1220281.stm

-live animal trade

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ⁱ In recent weeks scrapie infected sheep on farms in Vermont and Manitoba have been seized by agricultural authorities and destroyed on suspicion of being able to spread BSE. It will be several months before test results are in (Globe and Mail 2001). It is curious to note that although scrapie is endemic in North America, and has been for some time, that these sheep were suddenly seized, at the same time that FMD is spreading through Europe. Additionally, it has never been shown that scrapie infected sheep directly cause BSE. Cattle contract BSE as result of eating feed containing the carcasses of scrapie infected sheep. CJD, the human variant of BSE may result from eating BSE infected beef. Without the middle link of the beef, humans do not get CJD from sheep.