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Research report

Fear of animal foods: A century of zoonotics

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Abstract

Animal diseases can be spread to humans through the food supply. The article investigates this zoonotic hazard in an historical context and reflects on the nature of public reactions to such risk. It concludes that food scares have been with us for at least 150 years and that consumer responses in terms of changes in demand have been complex.

Keywords: Zoonotic disease; Food scares; Food history

Introduction

Zoonoses are diseases that can be passed to humans from animals and this article is about their mediation by the food supply. The zoonotic hazard overall has been growing in the UK since the mid-nineteenth century due to a number of factors, and the present paper is about the variety of public responses to this threat. It is a topic that has regularly hit the headlines in the last 20 years or so, but there is only a limited literature to help us think about the safety of livestock products in the past and to give an historical dimension to the contemporary debate about diseases such as Bovine Spongiform Encephalopathy (BSE).

Rather than reconstructing patterns of disease or describing their health impact, five discourses will be considered that indicate the dimensions of public concern. These are ways in which zoonoses have been discussed and perceived by society at large and they are means for us to analyze long-term trends. Several of the themes overlap or intersect with each other.

Early risk attitudes and the media

In this initial section we will discuss three ways of looking at risk in the late nineteenth and early twentieth centuries. First, there is the active risk-confronting attitude of the Victorians and Edwardians which can be seen in their writings about improving conditions of work in factories, upgrading slum housing, or building sewers (Freedgood, 2000). This social and sanitarian vision included concern for the food supply and there were attempts, for instance, to reduce adulteration through legislation, starting with the Sale of Food & Drugs Acts of 1860, 1872 and 1875 (French & Phillips, 2000).

Second, some animal-related risks had the characteristics of being socially constructed. Rabies, for instance, was a high-profile disease from the 1870s onwards (Walton, 1979). Mortality was minimal, but the particularly painful and unpleasant manner of death from 'hydrophobia' caught the public imagination and led to calls for dog muzzling in the streets and the quarantining of imported pets. Glanders and farcy, two variants of a bacterial horse disease, were also a source of what, in retrospect, seems to have been exaggerated public fear. According to Anne Hardy, the deaths in London of two ostlers' wives in 1892 from the human form of glanders caused 'public panic' and were the spur for its eradication as a public health risk (Hardy, 2002). The fear was generated by media attention and a content analysis of newspapers such as *The Times* would show an increasing trend over the last 150 years in the reporting of zoonotic food scares. There is no space here for a full treatment, but we may hypothesise that the trend is as much related to structural changes in the media as it is to any real increase in the risk of consuming animal foods. Beardsworth (1990) argues that modern food scares have many of the characteristics of 'moral panics,' and their genealogy can therefore be traced back to the sensational popular reporting of the late Victorian period, which in some forms has survived in today's tabloids.

Novels are potentially also a source of public information, perhaps the best example being Upton Sinclair's *The Jungle*,

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written as an exposé of the appalling conditions in the Chicago Stockyards (Sinclair, 1906). There was revulsion on both sides of the Atlantic for the large-scale industrial slaughtering that Sinclair described, and little imagination was required to guess at the low quality of food that it produced. An immediate loss of British consumer confidence in American canned meats caused a mini-crisis and gave ministers the momentum they needed to push tightened food regulations through parliament (the Public Health (Regulations as to Food) Act, 1907).

Third, there was a quantifiably significant set of hazards in consuming meat and milk up until the mid-twentieth century. The highest risk was from bovine tuberculosis, which is estimated to have been responsible for over 800,000 deaths in the UK between 1850 and 1960 (Atkins, 2000a), probably the largest food-related zoonotic mortality in history. This disease did not cause panic, however, because it was insidious, with outward symptoms similar to those of human, pulmonary tuberculosis (the main differences were a high incidence among babies and young children fed on cow's milk, and infection in sites away from the lungs). Discursive characteristics of this disease included a high degree of scientific controversy and an astonishingly fierce public debate about technologies such as pasteurization that offered a preventative solution. There was also dispute about appropriate policies of interventionist governance. Here, were many of the features of indeterminacy that are recognisable in recent discussions about BSE (Hinchliffe, 2001).

Beastly foods

To many Victorian observers, the presence of zoonoses was evidence of nature out of control, sometimes in the very heart of their rapidly growing cities. There was nothing new in epidemic livestock disease but the large-scale 'murrains' that swept through town dairies in the eighteenth and nineteenth centuries were somehow symbolic of the need to purify 'the urban' from animal externalities: their smell, manure, and blood. An intervention of great significance came in 1866 with the compulsory slaughter of animals infected with the 'cattle plague' or *rinderpest*. This demonstrated that such diseases were susceptible to policy, and central and local authorities were encouraged to introduce controls, for example the various Contagious Diseases (Animals) Acts. Also, in the 20 years or so before the First World War, planning measures imposed restrictions on the last urban livestock farmers, notably through strict hygiene requirements. Ironically, this seems to have increased the zoonotic hazard because production shifted to rural areas, where regulations and enforcement were lax.

Blame the consumer

A common discursive refrain, particularly in the nineteenth and early twentieth centuries, was criticism of the consumers of livestock products. From time to time they were accused of ignorance and lack of interest in high quality, disease-free meat and milk. Politicians and food industrialists were patronizing or simply dismissive of their intelligence and intentions, for instance as measured in their lack of willingness to pay for clean, pure milk in the early days of certified and graded milk in 1920s. In 1933 Sir Frederick Hobday, Principal of the Royal Veterinary College, thus asked how it was possible that there was still tuberculosis in milk.

> 'The answer lies mainly in the apathy of the general public which does not appear to wish, nor does it care, to know whether the milk is from a tuberculosis-free herd, nor will it as a body pay a small sum extra per quart in order to ensure that the milk is obtained from ... a ''tubercle-free'' herd (Hobday, 1933, p. 451).

This elitist view of expertise was common. Knowledge was seen to be vested in professions, such as that of veterinary surgeon. Consumers needed to be guided, educated and, above all, persuaded. Evidence from the USA and the UK suggests that the early decades of the twentieth century saw a step-change in attempts by food industries to shape the opinions of their customers. Protecting the reputation of corporate brands was one motive but there was also advertising and public relations activity by trade associations anxious to construct a positive image of their particular commodity. A good example of the latter was the National Milk Publicity Campaign, which from 1920 onwards sought to boost milk consumption. In addition, the many food campaigning organizations in civil society, such as the National Clean Milk Society (1915–1928), also contributed to moulding opinion through the construction of positive images.

Despite this model of top-down knowledge communication, consumer citizenship, defined as active participation in institution- and market-shaping, was nevertheless evident in the increasing numbers of societies and associations that campaigned for unadulterated food, wholemeal bread, vegetarianism, unpasteurized milk, or a minimum dietary standard for children. Some were inspired by mystic or political ideologies, some by the new science of vitamins, and others by a romantic vision of pre-industrial, wholesome food (Atkins, 2000b). The situation was fragmented, however, and difficult to characterise because consumers did not necessarily share common interests, modes of consumption, or health outcomes.

Food poisoning scares

The argument in this fourth section is complex. On the one hand we are told by risk society theorists (e.g., Beck, 1992) that modern food scares are emblematic of a loss of public trust in the institutions designed to uphold food safety. Consumers certainly seem to have greater concerns than, say, 30 years ago about the healthiness of their diet and have switched certain habits, for instance away from full-fat milk because of worries about heart disease. On the other hand, the evidence of long-term dietary change being linked to specific food poisoning scares or other zoonotic diseases is surprisingly thin.

If one were to rely solely on the media for information about food, it would be tempting to assume that food poisoning has been a major problem, particularly of the late twentieth century. Official data indicate a rising trend for *Campylobacter*,