



## Review article

### Food safety is political

Peter Sandøe

Danish Centre for Bioethics and Risk Assessment, Royal Veterinary and Agricultural University, Rolighedsvej 25, DK-1958 Frederiksberg C, Denmark; E-mail: pes@kvl.dk

Nestle, M.: 2003, *Safe Food. Bacteria, Biotechnology and Bioterrorism*. Berkeley, Los Angeles & London: University of California Press. 346 pages. ISBN: 0-520-23292-5. Price: £19.95.

This is a book about food safety. Its principal message, in the words of the author, is that food safety is “political”. By this Marion Nestle means that what counts as safe, and the way in which the safety of consumers is secured, depends on political decisions; and that these decisions are in turn connected with controversial questions involving values. For those not involved in the regulation of food safety, this message may sound tame. However, set against the dominant regulatory and scientific attitude to food safety, it is highly controversial. This attitude defines food safety in objective, quantitative terms derived from scientific risk assessment. Politics and values enter the picture only when, on the basis of science, it has been determined how a food item, or food production technique, may affect our health, how serious and how likely any adverse effects are, and how the risks in question can be controlled. Anyone sympathetic to this view should be encouraged to read this book.

Nestle is not writing solely for experts. She intends her book to be for “everyone – from general readers to scientists – who would like to know more about the issues underlying disputes about food safety issues”. In view of this, *Safe Food* is impressively free of jargon and technical discussions. Equally, although Nestle is a trained scientist, she manages to work in a truly interdisciplinary manner. And the book contains very good illustrations.

The book opens with an example, the so-called StarLink corn affair. In the autumn of 2000 a group of consumer activists learned that a variety of GM corn permitted for use in animal feed was present in taco shells made by Taco Bell. The major international scandal that ensued cost the companies

involved huge sums of money and seriously undermined public trust in the regulation of GM products. This case introduces five themes that Nestle develops in the book: (1) the fragmented, overlapping and confusing distribution of authority among the US agencies concerned with food safety; (2) the food industry’s promotion of economic self-interest at the expense of public health and safety; (3) the food industry’s use of science to promote its own interests; (4) how consumers and other kinds of advocacy groups use food safety issues to raise concerns about corporate power; and (5) how differences in approach to food safety cause communication difficulties.

On the last point, Nestle distinguishes between two approaches to the evaluation of food safety risks. According to the “science based” approach, food safety is based on scientific facts and can be calculated as the product of two factors: how serious the effects in question are and how likely they are. This means, for example, that an unlikely but lethal effect may be less important than a highly probable but mild health effect. The costs of reducing a risk and possible benefits should also be calculated, and at the end of the day decisions about food safety should be made by balancing the risks and other costs against benefits. Nestle calls the other approach the “value based” approach. This is misleading, because the difference between the two approaches is not about *whether* values are involved but about *what* values are involved (a point Nestle in fact recognises). At any rate, according to the second approach, it matters whether the risk in question is voluntary or imposed; visible or hidden; understood or uncertain; familiar or foreign; natural or technological, controllable or uncontrollable; fairly or unfairly distributed. Thus on this approach food safety is not just about limiting the objective probability that we will get ill or die from the food that we eat, but also deals with these “dread and outrage factors”.

On the science-based approach, the StarLink affair is not hugely significant. Owing to uncertainty

about whether a protein could cause allergic reactions, StarLink was not registered for human consumption. The experts involved believed the probability of StarLink corn actually causing allergic reactions to be low. And since the exposure of humans to the relevant protein was very low or non-existent, there was no reason to be concerned about the effect of StarLink corn on human health. When the case is viewed from the perspective of the value-based approach, on the other hand, many reasons to be concerned about StarLink emerge. It was a hazard that was imposed on the consumers. It was hidden. There was, and is, scientific uncertainty about it. It was something consumers were not familiar with. It is technological, not natural. Those who were to benefit, the biotech company and the farmers, were not the same as those who ran the risk, the consumers.

*Safe Food* divides into two main parts, each devoted to a separate food safety issue. The first is about the possible spread of diseases from animals to man via bacteria mainly found in meat or meat products; and the second examines possible effects of GM crops on human health and the environment. These are very different cases indeed. The spread of diseases like salmonellosis and campylobacter from animals to humans via meat is, on the science-based approach, a very real and significant risk. It is also the case that this problem is taken seriously by many experts, whereas most ordinary people do not seem to care much. The risk to human health posed by ingestion of GM foods, on the other hand, does not, on the science-based approach, add up to much of a problem. However, many ordinary people, not least in Europe, certainly see such foods as genuinely problematic.

According to an authoritative estimate Nestle reports, food-borne diseases in the US – most of which seem to originate from consumption of animal products – account for 76 million illnesses, 325,000 hospitalisations and 5000 deaths per year. The numbers are uncertain, but since they are based on a voluntary reporting system, they underestimate the extent of the problem according to the Nestle. By any standard, then, we are talking about a serious public health problem. Focus in the first part of the book is on the way in which the public authorities and the food industry in the US handle risks of bacterial food poisoning. In the first chapter Nestle presents the issues and explains the historical development of the regulatory system from the late nineteenth century. This background, according to the author, needed to explain a system “breathtaking in its irrationality: 35 separate laws administered by 12 agencies housed in six cabinet-level departments... The consequences of this system are famously absurd... The USDA, for

example, oversees production of hot dogs in pastry dough; the FDA regulates hot dogs in rolls. The USDA regulates corn dogs; the FDA regulates bagel dogs. The USDA regulates pepperoni pizza; the FDA regulates cheese pizza, ... the USDA regulates beef broth, but the FDA regulates chicken broth; for dehydrated broths, the agencies switch”.

In the following two chapters the author describes in detail how the regulation of meat safety developed from the mid-1970s. Her main claim is that, for a long while, regulation has provided more protection to food producers than to the public. This is changing, but change is slow owing to industry resistance, lack of political will, lack of resources and badly designed regulatory structures. And according to the author, much still needs to be done. In the fourth chapter Nestle discusses the necessary improvements. Her two main suggestions are, first, that the authorities need to focus on pathogen reduction using performance standards verified by pathogen testing at every step of food production; and second, that the various agencies responsible for food safety need to be reorganised into a single agency responsible for providing consistent and coordinated oversight of food safety, from farm to table. This echoes what seems to be a growing consensus in Europe.

Reading the discussion of food-borne infection in the first part of *Safe Food*, one cannot help but feel that Nestle is herself content to operate largely within a science-based framework – and that the value-based approach has slipped out of focus. The topic is the prevention of problems that can be clearly documented with microbiological and epidemiological methods, and the conclusions seem to be well in line with those that would be drawn in cost-benefit-analysis. This changes completely, however, when Nestle turns, in the second part of the book, to biotechnology. The conflict between the science-based and a value-based approach now takes centre stage.

The title of this part of the book is “Safety as a Surrogate – The Ironic Politics of Food Biotechnology”. This nicely captures the author’s main point. While the problem with the food-borne infections was that government and industry did not take food safety seriously enough, the problem here is that they insist on discussing GM food merely as a food safety issue. Since to date GM foods have not been associated with any identifiable, serious food safety risks, government and industry believe that there is no basis for blocking such foods from entering the food chain and no reason, moreover, to require foods containing GM ingredients to be labelled. In Nestle’s view, this approach is ironic, because as a result of the

official insistence on looking at genetic modification merely as a food safety issue, GM food ends up as being perceived by the public as unsafe.

A number of factors, all brought out very vividly by Nestle, contribute to this ironic outcome. One is labelling policy: if consumers are not allowed to know that a food is produced by means of genetic modification, the suspicion that there is something to hide grows. Another is overselling of the message that GM food is safe: this gives rise to mistrust and cynicism, which in turn ensures that revelatory stories such as the one about toxic proteins in GM potatoes and the connected Pusztai affair obtain heavy publicity. A further factor is the link between GM food and patents: many people are concerned that private corporations have too much control over genetic resources. And of course, perhaps most importantly, there is the issue of lack of consumer benefit: as we know, the advantages of first generation GM crops are largely agronomic.

Nestle concludes that we need a wider dialogue about GM food – one allowing concerns other than food safety, as defined by science, to be considered. This conclusion is in keeping with the verdicts of the European debate about food biotechnology. It provides a comforting counter-message to some of the transatlantic rhetoric about the way in which the debate over biotech divides Europe and North America.

In a concluding chapter, Nestle looks at a new food safety issue: “bioterrorism”. This became a public issue when anthrax letters were discovered following September 11. In my view, this attempt to make sure that *Safe Food* engages with issues of the day is not wholly successful. The discussion of bioterrorism is inadequately integrated with the rest of the book. However, this is one misgiving about an otherwise splendid book that can be warmly recommended to anyone interested in the wider societal issues linked to recent controversies concerning food safety.