Chapter 1

Ethical Traceability and Informed Food Choice

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Introduction

The traceability of food and feed emerged as a focus for political attention and regulation at both national and international governmental levels at the turn of the millennium. The industrialization of food production and manufacture, and the complexities and anonymity of modern supply chains have been accompanied by a new wave of concerns around the safety and quality of the food supply. The emergent concept of keeping track of food products and their different ingredients through the various stages from field to plate offers a potential means of managing some of the recent safety and quality concerns around food. Food traceability covers a range of overlapping objectives, which are outlined below, and so has a wide potential appeal, to regulators, producers, processors, retailers and consumers alike.

In this first chapter, we seek to establish the range of ethical concerns around food, drawing from an emerging canon of work on food ethics, and to look at the ways in which the concept of ethical traceability can enhance the public good of existing traceability systems. Traceability relates to where and how foods are produced. It follows that it has the potential to be developed as a tool for providing information to consumers that addresses their concerns about food production.. As traceability retells the history of a food, it can address the ethical, as well as the practical and physical, aspects of that history, enabling more informed food choice. The importance of ethical traceability for consumers is essentially twofold: firstly, it can help them make informed food choices; and secondly, it can act as a (democratizing) means for enabling food consumers to participate more fully as citizens in the shaping of the contemporary food supply. And ethical traceability has a third benefit, this time for food producers, who can use it as a tool for managing the ethical aspects of their own production practices and communicating ethical values about their food products. In the next sections, the nature of food traceability and its differing but overlapping objectives are explained, and the role of ethical traceability is elaborated.

The Emergence of traceability in the food chain

The idea of food traceability – that is, the ability to track or trace food – has emerged in modern societies due to the professionalization of food production, whereby the production of food has been separated from its consumption. Food is very rarely produced and consumed by the same people, but is produced by persons in one (or indeed several) place(s) and consumed by others in other places. In more traditional societies, where production and consumption occur at the same place and are carried out by the same people, or where trade is dominated by face-to-face transactions in which buyer and seller can verify the qualities of the food, there is no need for conceptualizing or formalizing the idea of traceability; traceability is inherent in the transaction. This is because knowledge about production practices is part of such societies, or because the chain is very short and direct. The industrialization of food production and distribution has changed this.

During the last 200 years, major changes have taken place in food production practices. Mass food production accompanied growing urbanization and settlement. Agricultural production was increased through industrial upscaling and associated technological developments ranging from more rapid long-distance transportation to

refrigeration and canning. The regular, face-to-face contact between buyer and seller declined, although this was not without its problems and consequent reaction. In the UK, adulteration of basic processed foodstuffs, such as sugar, led in 1844 to the creation by the urban working class of the first co-operative retail society, the Rochdale Society of Equitable Pioneers, in order to ensure supplies of unadulterated food. Such initiatives have since appeared in many countries all over the world, and today the direct marketing of farmers' produce is a growing phenomenon in many European countries, for instance in the form of box schemes, farm shops and farmers markets. The growth of these initiatives reflects the importance of traceability and the provenance of food for participating consumers.

One of the consequences of the industrial manufacture and long distance transportation of food is that it can change profoundly during processing and transit. Fresh produce, such as vegetables and meat, is susceptible to deterioration. Products from different farmers can be mixed or mistaken. Hence, at the beginning of the 20th century, new record-keeping systems were developed in order to keep track of which grower delivered what, so that the grower could receive the proper price for his produce (USDA, 2004:12). These were early traceability systems, although the term was not used at that time.

Today, the specialization of food production practices means that food is increasingly processed outside the household, using industrial and scientific techniques that are not familiar to ordinary consumers. For example, few consumers are familiar with modern bread processing techniques or the wide range of ingredients used in the industrial production of bread, although this is the main form of bread consumed in many European countries; nor are they aware of the extent to which olive oil from different sources is blended prior to retail; nor that a very large percentage of bacon sold in Denmark by Danish companies is not produced in Denmark, but in most cases comes from Germany or Poland. This industrialization and globalization of food production also mean that an increasing number of intermediaries, such as shippers, wholesalers, processors, re-packers, brokers, importers and exporters, are involved in the process. All of these factors help to obscure how food is produced, how it is handled and from where it originates.

Industrialization has not only changed food products and production practices fundamentally, but has also generated new risks in the food production chain. The recent EC-enforced focus on traceability in the food sector occurred mainly as a response to food scandals, notably the outbreak of BSE (Bovine Spongiform Encephalopathy or 'mad-cow' disease), in the 1990s in the UK and the discovery of dioxins in animal feed in Belgium in the late 1990s. (There are many other incidents, including for instance the contamination of Perrier water with benzene and the subsequent worldwide recall in 1990). More generally, since the 1980s there has been growing attention to the presence of pathogenic micro-organisms, such as salmonella, listeria, clostridium and E-coli O157, and other contaminants in food. In the US alone food-borne pathogens are considered to cause 76 million illnesses per year (Hutter, 2004).

Fraudulent practices and adulteration are other problems of food supply chains that have recently attracted media attention. For instance, in 2005 it was discovered in Germany that waste from slaughterhouses, intended for pet food, had been used for human food products. In Germany and Denmark, the selling of old meat long after it was deemed unsafe for human consumption, with false and 'renewed' expiry dates, in the so-called '*alte Fleisch Skandal*', made headlines in the media and certainly contributed to a decrease in trust in the food chain among consumers in those countries. Fraud in the food chain is far from new, but with more extended and complex supply chains the implications and consequences have grown. In an era of mass consumption, serious faults and mistakes that occur during the production process may endanger the lives of (many) innocent consumers. In the longer term, such accidents also rebound on the producers, resulting in adverse media coverage, consumers

deserting the product, and reaction from public authorities, which may impose regulatory sanctions or introduce reforms. Hence, it has become important in modern production systems to be able to trace faults rapidly when they occur during production.

Thus, traceability in its contemporary forms is intended to deal with the growing complexity of a food chain based on mass production and global distribution and consumption. It is used keep records of the processing and transportation of food products through all production stages. It should make it possible to trace a specific product back through the chain at any time, and so isolate contaminated goods and expose frauds. On a practical level, the ideal is to set up record-keeping systems that make it possible to trace product flow through all production stages, enabling identification of the exact origin of food products and their ingredients, and logging the transformation processes that a product undergoes before reaching consumers.

Traceability in contemporary food chains

Today, traceability has become common in the agri-food sector. Indeed, since 2005 EU law has required a certain level of traceability on the part of all food operators in the EU. Other traceability schemes are voluntarily implemented by actors in the food chain, as part of their business strategies or as part of quality assurance schemes, as we shall see in Part II. Many of the problems that are inherent in the modern food system, as described above, can be addressed by the introduction and implementation of traceability, which is thus used to meet a broad variety of commercial and regulatory objectives. Table 1.1 maps the key applications and objectives of traceability in contemporary food systems. The first four are widely used, while the fifth objective – consumer information and communication – is still in its initial phase. As we shall see, this fifth objective is, however, essential for developing traceability in the ethical direction of informed food choice.

Table 1.1. Key functions of traceability in the food sector.

Objectives of Traceability in Food
1. Risk management and food safety
• Risk assessment: mapping of foods and feed, food ingredients and processing technologies that have food safety implication (e.g. hygiene);
• Food residue surveillance: food sampling at appropriate points testing for residues, e.g. pesticides;
• Public health recall systems: identification of breakdowns in food safety along the food supply chain, allowing recall of contaminated products for the purpose of protecting public health.
2. Control and verification
• Surveillance and auditing of producer and retailer activities;
• Avoidance of fraud and theft: control of products by chemical and molecular approaches (biological 'food-prints');
• Identification of responsible actors (but also claims of innocence!);
• Ingredients definition;
• Avoidance of negative claims (e.g. 'may contain GMO traces').
3. Supply chain management and efficiency
• Cost effective management of the supply chain;
• Computerized stock inventory and ordering systems linked to point of sale;
• Just-in-time delivery systems;
• Efficient use of resources (cost minimization).
4. Provenance and quality assurance of products
• Marketing of health, ethical and other claims;

- Authenticity: identity of the product (food authentication) and the producer;
- Typicality: as with European schemes for Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI);
- Quality assurance of standards at different stages of production and/or processing (e.g. environmental protocols for production);
- Final product quality assurance.

5. Information and Communication to the Consumer

- Transparency of the production history;
- Facilitation of informed food choice, through transparency and the ability to compare different products;
- Recognition of specific consumers concerns and information demands – where such concerns and demands are not static but may evolve;
- Public participation; consumer services, companies' 'care lines' and consultation to obtain consumer feedback.

Five objectives can be distinguished, even though there are some overlaps between them. The first category, risk management and food safety, has been a primary focus of regulatory attempts to introduce traceability. Food safety control has been built upon process-based auditing, such as HACCP (Hazard Analysis of Critical Control Points) standards and the International Organisation for Standardisation ISO 9000 (traceability is mentioned in ISO 9001:2000 as one aspect to be considered in quality management systems). The need to be able to recall contaminated products for public health reasons motivated food producers to incorporate traceability systems into supply chain management processes originally implemented to achieve efficiencies (Farm Foundation, 2004:8). The latter – supply chain management and efficiency – is the third category in Table 1.1, and its main concern is to allow food companies, notably the corporate retailers, to manage the flow of goods and information, link inventory to consumer purchasing, set product specifications for growers and processors under contract, and so on, in order to meet market demand and secure the efficient use of resources. Traceability is thus an instrument that can be deployed for a variety of purposes, often at the same time. Hence in practice there will usually be some overlap between the different categories depicted in Table 1.1, and traceability will rarely if ever be implemented for only one of the objectives mentioned. For example, the second category interweaves with the other two mentioned above. Keeping a record of the production history of a product can be used for surveillance and fraud prevention. It is interesting to observe that the two largest retail companies of the world, Wal-Mart and Carrefour, are increasingly asking for complete traceability from their suppliers (Bantham and Duval, 2004).

The fourth category is likewise linked to the second, as it concerns verification of quality claims and label schemes. Quality is a complex term, as the perception and dimensions of quality are continually shifting (an example would be the multiple uses and perceptions of the term 'fresh'). But the goals of traceability as set out in the fourth category can to some extent reflect ethical criteria for food production practices and also consumers' ethical concerns, and communicate them via labels. Four examples, out of many labelling schemes, are: the organic labels found in most European countries, the UK Red Tractor scheme, the UK Royal Society for the Protection of Animals' (RSPCA) Freedom Food label, and the French Label Rouge. Increasingly, quality parameters of an ethical nature are integrated into supermarkets' own brands. However, we should note that this book does not directly address labelling. A motivating and decisive factor for taking up the idea of ethical traceability in this book was a growing awareness of the limits of labels; that they are symbolic representations of often rather huge quantities of information, which are rarely communicated to consumers and which are not accessible to ordinary consumers. Moreover,

labels can in some cases create more confusion than enlightenment. This was shown in a European study called *Welfare Quality* on food labels in relation to animal welfare. The study showed that there were huge differences between labels in different EU countries and that there was disagreement as to definitions of animal welfare standards (Welfare Quality, 2005). In the light of the shortcomings of labels, ethical traceability was from the outset conceived as an alternative that could provide more complete information to consumers and thus respond more efficiently to consumers' ethical concerns (these are discussed in more detail later in this chapter).

The fifth category of objectives for traceability is far from fully developed. In some ways it is an aspiration that would facilitate consumers' understanding of food production practices and their ability to make informed choices about the foodstuffs they purchase and eat. It concerns the *communication* of production practices in the food chain. The term communication is not restricted here to information flows between producers, retailers and food authorities, but also includes making information available to consumers. In this sense, traceability is about visibility; it is about making the production history of food visible to the eyes of the consumers. It allows producers and retailers to establish a more advanced kind of communication with consumers about production practices. This more detailed communication could facilitate more informed choice by consumers.

The fourth category allows for some of these aspirations to be met, but the communication is shaped by the producers and/or the retailers (in some assurance schemes) and by the processors (in the EU's geographical origin schemes, the Protected Designations of Origin, PDO, and Protected Geographical Indications, PGI). The fifth category envisions more responsive and transparent systems, where traceability links to the ethics of food production practices.

This book concentrates on the fourth and fifth categories of traceability, as we seek to develop the idea of *ethical* traceability. It is, however, important to understand the different uses of traceability and to see it in its broad context, to get an idea of how the term has developed and how it is being used at present. Our focus on the ethical dimensions of traceability also means that this book does not include technical matters or enabling technologies for traceability (but see Annex 1 to Chapter 13 for a discussion of some technological approaches to ethical traceability). The technical enabling of traceability is developing very rapidly in the current climate, seeking to deliver with greater and more rapid precision an expanding range of features. Traceability may involve keeping track of hundreds of inputs and processes, and the systems required to handle and transmit of all this data need to be highly sophisticated. Most of the information in traceability systems would be irrelevant to consumers, as it concerns matters that are of interest only to actors in the supply chain. For instance, details about the moisture content of a consignment of wheat and the variety of grain used are essential to flour millers, who need the information to make decisions about how to process the grain and what type of flour to turn it into. Consumers will want to know what sort of flour they are buying, but in many cases are not interested in the technical details leading to the production of that type of flour.

The different uses to which traceability can be put has led several authors to speak of traceability as a *tool* (among others Clemens, 2003:3; EU Standing Committee on the Food chain and Animal Health, 2004:10; USDA, 2004:3, Farm Foundation, 2004:22, CIES, 2005:6, GS1, 2006:6-8). So, looking at traceability from a different perspective from that presented in Table 1.1, three categories of traceability as a tool can be distinguished:

1. Management tool
Purpose: Supply chain management and internal management of resources in co-operations.

2. Government tool

Purpose: Political and administrative government of the food chain, anti-fraud measures and verification of product attributes and liability.

3. Communication tool

'Value-capture' of food qualities (such as animal welfare) for the purpose of informing consumers.

In this book we focus on traceability as a tool for informing and communicating with consumers on ethical concerns. This aspect of traceability is mentioned in several reports on traceability, but has so far never been treated in depth (see among others Food Strategy Division and Food Standards Agency, 2002:2; Farm Foundation, 2004:8; USDA, 2004:9).

To some extent, all traceability is ethical. Food safety is obviously an ethical issue since it aims at protecting consumers from food-borne diseases and pollution. Preventing fraud in the food chain is likewise inherently ethical, as is guaranteeing the accuracy of the information provided to consumers, and the verification of assurance and labelling schemes. However, it is at the communication level that specifically 'ethical' traceability gains a certain power. For actors in the food chain (be they processors, manufacturers or retailers) who wish to secure a minimum level of ethical behaviour among their suppliers, ethical traceability provides information on the ethics of a given product's production history, which is essential if the buyer is to be able to form an ethical judgement of the supplier (see Coff, 2006, for a description of the link between food ethics and food production histories). And the same goes for consumers: ethical traceability should provide the information necessary for consumers to exercise their ethical judgement about the production history of a given food, and thus allow consumers' informed choice. Such information is vital to ethical consumers who are concerned about the impact of food production on issues such as animal welfare, working conditions, the environment and sustainability.

The different uses of traceability make it a potential battlefield. There is widespread agreement that the need for fully documented traceability systems within the food chain has never been stronger (Morrison, 2003:459), but there is tremendous disagreement about the purpose of introducing traceability and about which aspects of production should be incorporated in traceability systems. These arguments about how to make use of traceability in supply chains expose disagreements about the role of food ethics in production practices. Many of these issues are discussed in ensuing chapters of this book.

Ethics, traceability and food

Most people are aware that in recent decades massive changes have taken place in agricultural and food production practices. This is clear not only from the radical changes that can be observed in the landscape and the bewildering array of goods available in contemporary supermarkets, but also from media headlines. Media coverage of food production practices tends to highlight negative aspects, such as food scandals, environmental and animal welfare problems, and so forth.

The physical, social and mental separation of production and consumption, which is characteristic of modern societies, means that in most cases producers and consumers do not know each other and that consumers do not know what happens during production processes. They are invisible to one another. In spite of this differentiation of the two spheres, and the obscurity of the food system, people, as citizens and consumers, may still seek to feel that they somehow are involved in agriculture and food production. Or, at least, that food production practices matter, in the sense that it makes a difference to consumer-citizens if

food is produced in one way as opposed to another. But how can food production practices matter, even though production has been so clearly separated from consumption?

There is an old saying that 'if you eat, you are involved in agriculture'. Shopping, preparing and eating are key notions for understanding the involvement of consumers in the agri-food sector. These three activities are acts that lead the thoughts in two different directions. We could say that our thoughts are led both backwards and forwards in time. Shopping, preparing and eating are, so to speak, specific points in a chain of events, from which it is possible to think both backwards and forwards. We think backwards when we consider *what* we are buying, preparing and eating. We cannot ascertain if something is edible, and for instance whether it is meat or a vegetable, without relating our sensuous perception to our knowledge of what is meat and what is a vegetable. We have an idea of what is meat and what is a vegetable, and from our experience we judge them to be either edible or non-edible. Now, this experience is often associated with many different stories. One very simple story is that meat comes from living animals. For some people, this knowledge is very important (vegetarians, for instance). This simple illustration shows how, in the act of eating, we consciously or unconsciously direct our thoughts towards the past.

We also direct our thoughts towards the future, when considering how a food will affect our bodies. Food is taken into the body. It is incorporated and incarnated. In this sense, food links our body with past events in the agri-food sector in a very physical sense. But we might also consider the pleasure of the food (taste, digestibility, effect on the mental state, and so forth), the healthiness of the food, and the social and cultural contexts of shopping, cooking and eating. With the food we choose, we make a statement about our identity and connect ourselves with other people who make the same kind of food choices. Vegetarianism, or whatever kind of diet we choose, is as much about belonging to certain groups as about eating. This gives some idea of why production practices in the agri-food sector still matter for many people, despite the separation of production and consumption. Highlighting the link between consumers' activities and the production history of foods takes us to the central theme of the book: that is, *traceability*. To return to the meaning of the concept, it refers to the history of a product and the records kept of that history.[1] Thus, traceability seems to offer the possibility of making the link between production and consumption visible. As mentioned earlier, traceability is already a requirement of EU food law (regulation (EC) No 178/2002). Thus all European food businesses have a legal responsibility to implement traceability. The question raised in this book is: can this traceability be used to provide ethical information to consumers about the production history of foods, and thereby enable consumers to make informed choices on ethical issues?

A central concern, then, is how traceability can link to food ethics. That is why we have introduced the term 'ethical traceability'. Food ethics is a discipline that embraces many different ethical and philosophical studies on food. However, it is not just an academic discipline; it also describes more practical ways in which people think about food and act according to their values of right, injustice or good and bad in food production. At present there are roughly four main research areas within food ethics, presented in Table 1.2.

Table 1.2: Research areas in food ethics.

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[1] The internationally most recognized definition of traceability belongs to ISO. ISO 9000:2000 refers to a set of quality management standards. To this set belongs ISO 8402. This standard defines traceability as 'the ability to trace the history, application or location of an entity by means of recorded identifications. More recently ISO has defined traceability in terms of management: 'A Traceability system is a useful tool to assist an organization operating within a feed and food chain to achieve defined objectives in a management system' (ISO, 2007: iv).

Research areas in food ethics
1. Food security deals with the just and fair supply of food to human beings. With more than 800 million starving or undernourished people in the world, this is probably the most pressing ethical question.
2. Food safety deals with the safety of the food: food should not endanger the health of consumers due to pathogens or pollution present in the food. There are ongoing discussions about what is safe enough and whose definition of safety should be followed.
3. New developments in **nutritional research** and technology, such as personalized nutrition, functional foods and health foods, challenge existing norms and values about food. This also includes food-related diseases such as obesity, cardio-vascular diseases and cancer and their association with food culture, because they raise issues of responsibility and respect for 'non-healthy' life-styles and production methods.
4. Ethical questions raised by specific production practices and conditions in the food chain. This concerns animal welfare, the environment, sustainability, working conditions, use of new (bio and nano) technology, research ethics, and so forth. These ethics relate to the production history of the food, that is how and under what conditions it was produced.

Traceability is about keeping track of the history of the food. *Ethical* traceability is about keeping track of the ethical aspects of food production practices and the conditions under which the food is produced. Ethical traceability is a means of capturing and mapping values and processes in the food production chain. It can be used as a verification process of the methods and practices used, in response to consumers' ethical concerns. It can be defined in the following way:

> ***Ethical traceability is the ability to trace and map ethical aspects of the food chain by means of recorded identifications***

Once the information on the ethical aspects of production practices has been captured and mapped, it can be used to communicate with interested stakeholders in the food chain, including producers, processors, retailers and consumers. It can be used as part of the 'value-capture' of products and also to enable stakeholders to make choices consistent with their own values. Tim Lang, co-author of Chapter 6, discerns a movement away from 'value for money', the idea that price is the fundamental determinant of choice, towards 'values for money', reflecting the notion that consumers are more than just wallets on legs, but are also citizens who will select and reward companies that behave in socially responsible ways (Lang, 2007).

Consumers' ethical concerns
Based on work by the philosopher Michiel Korthals in the initial phase of the project, 10 main ethical concerns relevant to food production were identified (see Table 1.3). These 10 concerns were used to structure some of the philosophical work, and especially to structure the interviews used in the empirical research presented in Part II. The 10 concerns can be divided into two categories. First, consumers have **substantive concerns** about the first seven ethical issues while shopping for food. These are issues that relate directly to the consequences of production practices or to the consequences or impacts of food consumption, for instance human health and food quality. They are substantive in that they are a matter of substance rather than a matter of procedure; we could also term them vertical or specific

concerns. This leads to the second category, the **procedural concerns,** which includes the last three ethical issues listed. Procedural refers in this context to the communicative aspects of information sharing, feedback and listening procedures, participatory methods and co-production. They are procedural in the sense that they are not matters of substance, but are horizontal and cut across the various substantive or vertical concerns. They are about access to and availability of information, the reliability of information, and the opportunity for consumers to have a voice on the substantive concerns. The two categories are of a different nature and therefore they raise different problems and demand different solutions. Furthermore, each concern may embody more than ethics, and each concern may be interlinked with others from the list. For instance, is 'origin and place' a concern that works differently from 'terms of trade'? 'Origin and place' may not necessarily be an ethical parameter, but people make a lot of associations with origin and place that involve ethical judgements. Equally, 'origin and place' may be linked to concerns around 'working conditions', such as with food from developing countries. Also, trust is a complex concern that seems to be interlinked with the other procedural concerns of transparency, voice and participation.

Table 1.3. 10 ethical consumer concerns relevant to food production, used as a basis for the studies in this book.

1. **Animal welfare**
2. **Human health**
3. **Methods of production and processing and their impact (e.g., environmental, landscape)**
4. **Terms of trade (fair price, etc.)**
5. **Working conditions**
6. **Quality (intrinsic qualities such as taste, composition, etc.)**
7. **Origin and place**
8. **Trust**
9. **Voice (participation)**
10. **Transparency**

Informed food choice

Ethical consumption mixes the role of consumer with that of citizen. The term 'consumer-citizen' refers to this duality (see for instance the *Consumer Citizenship Network* and Scammell, 2003). Clive Barnett and his colleagues (2005:4-5) consider consumer-oriented activism as a pathway to participation for ordinary people. Ethical consumption is a reconfiguration of the consumer's role, merging it with the citizen's role. The majority of consumers subscribe to at least one of the 10 ethical concerns listed above. From a recent attitudinal survey we know that in Europe 60% of the population is worried about animal welfare when prompted (European Commission, 2006:28). However, in this study only a minority subscribed to two or more of the concerns.

Empirical sociology and psychology have taught us that there is often a gap between people's attitudes and their behaviour. Consumers' concerns as measured in surveys do not always translate into actual food purchasing behaviour. This means that even if consumers express concerns about animal welfare (attitude) they will not necessarily purchase meat selectively (behaviour). Many factors contribute to this gap. For instance, it can be difficult to shop according to individual values due to a lack of reliable information or a lack of trust in the food system. Economic constraints or lack of easy access to food with the desired ethical

attributes can also act as barriers. In Figure 1.1 we have listed some of the major issues that influence consumers' food choice (in a simplified form, as there may be many more). From the figure it is clear that choosing food is not a simple matter, and that many different and opposing interests must be weighed against each other. The priority given to different interests may vary over time, depending on the situation, the mood of the consumer or the social contexts at the moment of shopping.
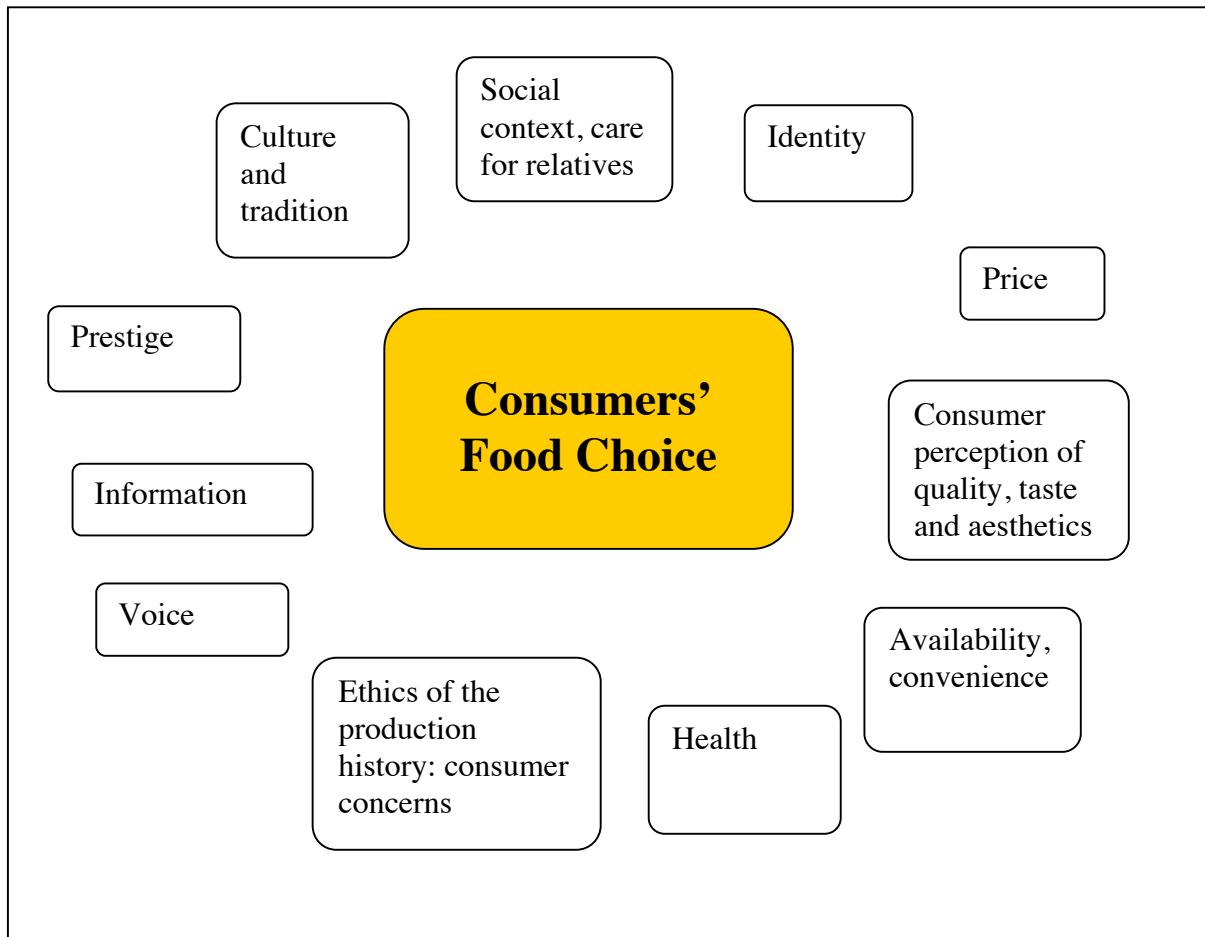

Figure 1.1. Some factors affecting consumers' food choice.

Some of the issues in Figure 1.1 are related to self-interest. Price, quality, taste, prestige, health and convenience can all be part of self-interested considerations around the 'best buy'. Purely self-interested considerations can, in fact, be said to lack any ethical reflection and awareness, since they entail no concern for others. The ethical dimension of food purchase is opened when food is bought not only for one's own satisfaction, but also to take into consideration the needs of others.

Barnett and his colleagues (2005:99) speak of *caring at a distance*, because the others that we take into consideration or show care for in ethical consumption are not necessarily people we encounter face to face, but may be distant from us. The problem with such an approach to showing care is that it is often assumed that the consequences of our actions are unintelligible, as they are hidden by the 'space' in between. There are different approaches on how to make the long-range ethics required to care for these distant others functional. For instance, it has been proposed that long-range ethics could be based on short-range ethics (face-to-face interaction) by making the distant consequences visible (Coff, 2006:100). The intention behind such a strategy is to let food production practices appear in narrative forms,

as stories, or production (hi)stories, so that consumer-citizens can take a stance on them and the consequences can be made explicit.

Whichever way ethical consumption is carried out and whatever strategy is used, it needs some degree of concerted action by organizations, institutions, consumers, and so forth (Barnett *et al.*, 2004:8). As an individual consumer it can be impossible to gain access to the ethical information desired (see for instance Coff, 2006:175 for such an attempt). Co-operation among actors in the chain is necessary to ensure access to the necessary information. In a dynamic fashion, feedback from consumers to producers and processors may enhance the development of new and 'more ethical' food production practices. Mobilization of consumer support for ethical trading and consumption can also be promoted by organizational efforts, such as campaigns. The nature of the *agencies* involved and the collective organizations that serve as the *mediators* of engagement and participation are also important (Barnett *et al.,* 2005:7). In Chapter 13 of this book the organizational aspects of ethical traceability are developed in more detail.

Some issues in Figure 1.1 are related to sociological and cultural aspects of food production and consumption. For instance, it is clear that food choice is linked to culture, social class and tradition. The selection of food – the matter or 'environment' to be incorporated in one's own body – confers identity not only through the social context in which it takes place but also, on a more individual level, through selection of particular foods, such as the avoidance of meat, preferences for organic food or animal-friendly meat, one's own particular preferences or dislikes, the avoidance of certain food ingredients because of their association with certain diseases, and so forth.

Information plays a crucial role for most of the issues in Figure 1.1, and for some of the issues it is paramount. It is well documented that many animals instinctively know which plants can cure diseases and also which plants/animals should be avoided. This is no longer the case for human beings: we need knowledge to help us distinguish what is edible. In fact human food is embedded in a culture of knowledge. Food in its different social contexts relies heavily on knowledge, not so much about the food itself but on cultural traditions and habits.

However, consumers differ about which information they see as relevant; much of the information that is provided simply goes unnoticed because it is not relevant to the consumer's purposes. To be sure, in order to estimate the impact of food intake on health consumers need to be informed; but consumers have very different conceptions of health. Furthermore, information is essential for consumer decision-making as it allows for comparison between alternatives. The aim of making a comparison between different foods is to arrive at a judgement about which is the best food. 'Best' depends, of course, on what criteria one considers most important. Such a judgement cannot be made without information.

For the consumer who finds the ways and modes of production important, access to *relevant* information is a key concern. It has already been said that some consumers, called ethical consumers, have an interest in the ethical aspects of the production history of foods (see Harrison *et al.*, 2005). If consumers want to choose food on the basis of ethical considerations, and to make *informed food choices*, it is necessary to make ethical information on the production history of foods accessible to consumers. The core question that we look into in this book is how ethical traceability can be linked to the idea and practice of informed food choice.

The plan of the book

Regulations on food traceability are gradually being implemented worldwide. Research on food traceability is increasing and so is the literature on traceability. Most food companies either have implemented traceability schemes or are in the process of doing so. A great deal of attention is given to the development of traceability schemes. New tracing techniques that

make use of computers, the internet or molecular tests serve to make tracing more efficient and also to make it possible to include still more parameters, such as food quality or handling during processing, and increasingly to include ethical dimensions. There is no doubt that traceability has become a major issue in the creation of modern food policies and that it is an issue that involves all actors in the food chain.

However, little attention has so far been paid to how traceability could be used to 'trace' ethical dimensions in the agri-food sector and thus address the consumer concerns mentioned earlier in this chapter. This, therefore, is the key aim of this book: to address existing (and possible future) links between traceability on the one hand and ethics on the other. The authors of the book have explored in their research how traceability links to the ethical questions and concerns of the agri-food sector. No less important is the question of how traceability in the future *could be* related to ethical questions and concerns. Such reflections on ethical traceability – that is the tracing of ethical aspects of the food chain, and how this process could be used to facilitate informed food choice – have presented a common and major challenge for all the authors.

The book has four parts, which represent four aspects of the link between traceability and ethics.

Part I: Regulation, governance and narrative strategies of food traceability
Part I presents the broader policy and social contexts within which the development and contemporary place of food traceability may be understood. It starts with the current status of the regulation of food traceability, and goes on to discuss how food traceability regulation and implementation have been developed through processes of governance. It ends with an analysis of how traceability in the form of narratives is used by food companies in advertising. In Chapter 2, Alessandro Arienzo, Christian Coff and David Barling offer an analysis of the status of traceability in EU food law and regulation. The authors argue that the democratizing potential of full agri-food traceability is missed. It is concluded that there is potential for a more comprehensive mode of (ethical) traceability, which could open the way for a more informed and participatory food system. David Barling in Chapter 3 examines the governing and wider governance of food and food traceability. Contemporary agri-food governance is portrayed as a process marked by both conflict and compromise, involving both public (state) and private actors (from the corporate sector and from civil society). The multi-level nature of agri-food governance frames the conflicts that have occurred over the development of food traceability standards at the international level, illustrated by the conflicts that have taken place in the Codex Alimentarius (Codex). In Chapter 4, Guido Nicolosi and Michiel Korthals examine advertising strategies in selected Italian and Spanish magazines and discuss how these make use of narratives that draw on the traceability of the food in addressing consumers. Tradition, nature, geographical and cultural origins are almost obsessively present in the advertisements examined. It is shown that the narrative strategies relate to some substantive ethical concerns but not to the procedural concerns of consumers.

Part II: Ethical traceability case studies
Part II presents three case studies on traceability and ethical traceability in different food supply chains. The case studies are: pigs into bacon in Denmark, wheat into bread in the UK, and olives into olive oil in Greece. Each case study describes and analyses the current status of traceability in the chain and looks at the extent to which ethical traceability is being addressed and how it is being handled. The case studies present empirical data collected from interviews with stakeholders and consumers from the three chains. The interviews included questions about the 10 ethical concerns outlined earlier in this chapter, and about information flows in the chains studied. The research found that some of these concerns are already

addressed by existing traceability or assurance schemes. In all three case studies it was found that producers in the chain felt well supplied with information whereas consumers, by contrast, felt that information was withheld and unreliable.

In Chapter 5, Thorkild Nielsen and Niels Heine Kristensen describe how Danish consumers feel a need for more information about bacon production practices, especially about some of the invisible attributes, such as origin, use of medicine and animal welfare, even though there is a long tradition for highly developed traceability systems. Traceability is *reactive* in this chain and is not intended to transmit information on the safety, production practices or quality of the final product proactively downstream to firms or end-consumers. Rosalind Sharpe, David Barling and Tim Lang show, in Chapter 6, how traceability in the UK wheat-bread chain is limited by the routine practice of blending wheat for convenient handling and to manipulate quality and cost. However, some examples of traceability back to farm were found. This chain, which is highly industrialized, is subject to many regulatory and quasi-regulatory controls (such as the regulations governing the development of wheat varieties, or the assurance schemes which impose quality standards on all wheat destined for human consumption, from farm to mill) which incorporate traceability and which include ethical dimensions. In Chapter 7, Agapi Vassiliou, Emmanouil Kabourakis and Dimitris Papadopoulos explore the olive oil chain and describe how traceability and potentially ethical traceability were widely said to be limited by the practice of blending oil by olive mills and packing houses, in order to manipulate quality and cost or for convenience. The dominant ethical concerns for stakeholders and consumers in the olive oil supply chain are trust and transparency.

Part III: Ethical Traceability and its philosophical implications for civil society, state, and markets

The philosophical studies all deal with the challenges and philosophical problems that the notion of ethical traceability raises. Of course, not all these challenges and problems can be solved here and disagreements are likely to persist. However, the chapters expose most of the important challenges raised by ethical traceability, which deserve further attention and reflection in the future. The studies do not stop at mapping and exposing the challenges; they go on to present some of the ways in which ethical traceability could assist in solving problems that face actors in all parts of the food chain, including consumers.

In Chapter 8, Christian Coff opens with a discussion of the challenges that ethical traceability presents to common perceptions of the structural organization of society. Ethical traceability breaks with many mainstream ideas about what should be considered as private and public concerns. Implementing ethical traceability and informed food choice entails creating new kinds of public spheres and a new kind of civil society. The two subsequent chapters also address the tasks of the market (private) and the government (public). In Chapter 9, Liesbeth Schipper asks whether the issue of animal welfare should be dealt with by the market or by the government, and whether traceability should be used as a communication tool or a government tool for improving animal welfare. In Chapter 10, Volkert Beekman also examines what the roles of the market and government should be and links this to an analysis of which kinds of ethical traceability could be justified from the perspective of liberal political philosophy. In chapter 11, Michiel Korthals's focus is on how consumer concerns can democratically and practically be incorporated in the market and in food chains by participatory methods. The concept of 'Ethical Room for Manoeuvre' is constructed to specify the ethically desirable conditions under which the identification and weighing of values and their dilemmas can be processed. Marco Castagna emphasizes in Chapter 12 that tracing always involves interpretation. Interpretation by consumers, it is argued, opens up new ways of consumer participation and involvement.

Part IV: Conclusions and outlook

Part IV opens with Chapter 13, where Volkert Beekman, Christain Coff, Michiel Korthals and Liesbeth Schipper map different ways of providing information to consumers on ethical traceability and establishing communication with consumers. Participative strategies are discussed in the light of ethical traceability, and a three-step process is recommended which involves (1) providing sound information to consumers; (2) facilitation of everyday dialogue between consumers and producers; and (3) deeper engagement between dedicated consumer-citizens and producers. In Chapter 14, Christian Coff, David Barling and Michiel Korthals summarize the main conclusions and results of the book. The authors start with a presentation of the main findings of the sociological investigations and the main conclusions of the philosophical reflections. Implementing ethical traceability also entails problems, so the major risks associated with ethical traceability are listed. The chapter ends with a set of recommendations on how to develop the idea of ethical traceability in practice as well as in future research.

Finally, two political speeches on ethical traceability are presented in an annex to Part IV. Both speeches were presented at a conference entitled *Ethical Traceability in the Food Chain* held in Brussels on 20 September 2006. The first speech is by Margaritis Schinas, Head of Cabinet to Markus Kyprianou, Commissioner for Health and Consumer Protection. In the speech he presents the work and views of Directorate General Health and Consumer Protection (DG SANCO) on consumers' informed choice. The second speech, from Mariann Fischer Boel, European Commissioner for Agriculture and Rural Development, addressed the role of traceability, ethics and food quality in the EU's Common Agricultural Policy.

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