Trust and confidence in Food Safety

George Gaskell and KatrinHohl

London School of Economics and Political Science and City University

1. On the nature of trust

Trust is a fundamental part of the fabric of civil society. Without trust the transactional costs of checking every situation we confront that might pose a risk would render life impossible. We rely on shops, transport systems, energy supply companies and countless other people and organisations to act in the wider public interest and to protect our safety.

Trust becomes an issue when more tangible notions, for example scientific expertise fail, for whatever reason, to guide the management of uncertainty. Yet, lying behind such problems is a perplexing social phenomenon. How is it that the future is sometimes completely unproblematic, a natural extension of the past accompanied by no sense of uncertainty or concern? It is as if the future is assimilated into routines of the present. Yet at other times the future stands out as the 'figure', the centre of attention.

It is a paradox; when trust is needed, it is difficult to obtain, and where it is not needed, it seems to be available in abundance. This paradox can be understood by exploring Luhmann's distinction between familiarity, confidence and trust.

Familiarity: With familiarity the future is a generalized extension of the past. It is taken for granted that life will go on as normal. Everyday routines are so well established that we are hardly aware of them. Thus, generally speaking, interactions with family members, acquaintances and expert systems progress without any concern that expectations based on past experience will not be fulfilled.

Trust: In an increasingly complex world people cannot be experts or even reasonably well informed about every new situation or decision they confront. As such, people may actively decide to rely on others and in so doing they act on trust. To trust is to transfer or delegate responsibility for the future to an 'other'. However, the actor is aware that there is a risk of disappointment, as the 'other' may or may not act in the interests of the person. Trust acts to reduce the uncertainty of the future and in eliminating the perceived risk provides a basis for action. Crucially, with trust the actor recognises that he or she has a choice in the matter, to trust or not to trust. Frequently, but not exclusively, it involves personal relations between the actor and the other.

Confidence: People's lives are inevitably affected by social institutions, technical systems and the actions of unknown others. While the dangers inherent of relying on such 'others' could be entertained, normally they are not. It is assumed that the engineers checking trains and planes, food producers and public servants, for

1

example, know what to do and are doing it properly. In such situations people have confidence that their implicit expectations will be met. Disappointment is not normally contemplated, in part, because the actor has no choice in the matter; there is no realistic alternative. When expectations are disappointed it leads to feelings of threat or danger (as opposed to risk), because there is no feasible way out. Decisions based on confidence frequently, but not exclusively, involve relations with systems or experts.

2. Preconditions for trust

Preconditions are generalized expectations, applicable across situations that are at the core of familiarity, trust and confidence. Preconditions set the bases for trust and comprise assumptions about the generalised other. For trust or confidence to exist there must be a correspondence between prior expectations and actual experience. Barber (1983) outlines three preconditions. *Value compatibility* concerns expectations about the other's moral and value orientation. People assume that the political, legal and economic systems, in the sense of rules, procedures and people involved more or less reflect their values. *Technical competence* is the expectation that those with responsibility have the necessary skills to carry out their functions properly. Finally, *public or fiduciary responsibility* is the expectation that people will acknowledge, and be motivated to serve, other people's interests and not merely their own.

What opportunities are available to the actor whose expectations have not been met?Hirschmann's (1970) analysis of responses to institutional change can be usefully extended to confidence and trust situations.Hirschmann outlines three responses to changes in institutional life, whether organizational, political or technological. These are exit, voice and loyalty. If an actor objects, for example, to new policies and procedures, he or she may exit in protest, or put up with the changes and remain loyal, or stay in and exercise voice, making a protest about what is going on. According to Hirschmann, voice is more likely to occur either in situations where exit is ruled out, or where the ties of loyalty make exit difficult. However, exit may be a last resort when voice is seen to have no effect.

Characterising a situation in terms of trust or confidence has important implications for the understanding of societal processes. For example, the opportunities to respond to disappointment in trust and confidence situations have different implications for social cohesion. Those who withdraw trust are, by definition, in a position to find an alternative. Hence the withdrawal of trust is a constraint but equally it is an opportunity to find alternatives. By contrast those disappointed in a confidence situation experience constraint without opportunity. Their only recourse is the voice option, and whether the voice will be heard, let alone heeded, is open to question. While the impact of exit is immediate and points the actor to a new course of action, voice may take time and effort to produce an impact on the other. Structural constraints of one form or another in modern democracies mean that voice is often little more than a cry in the wilderness. The reality, some would say, is that people just have to put up and shut up, with all the implications this carries for estrangement from the political processes. In this sense a crisis of trust may be less of a threat to society than a crisis of confidence.

2

3. Trust and confidence in food safety in Europe

In 2010 the European Food Safety Authority (EFSA) commissioned a Special Eurobarometer survey (354) on Food Related Risks. The survey, with a representative sample of circa 1000 adult respondents was fielded in the 27 Member States of the European Union by TNS Opinion & Social at the request of the European Food Safety Authority (EFSA) see http://www.efsa.europa.eu/en/factsheet/docs/reporten.pdf. In the following sections a selection of the findings of the survey pertaining to public confidence in food safety are presented.

3.1 What food risks worry Europeans?

In the survey respondents were asked two questions in sequence.

First an open ended question asked "*Could you tell me in your own words, what are all the things that come to your mind when thinking about possible problems and risks associated with food and eating? Just say out loud whatever comes to mind and I will write it down*".

This was followed by a closed question in which respondents were asked "Please tell me to what extent you are worried or not about the following issues". The issues comprised seventeen food risks selected by EFSA's experts. (response ranged from 1=very worried to 4=not at all worried).

The open question elicits unprompted *awareness of risks* drawing upon people's own experience and food issues that are featured in the media. The closed question assesses how much people claim to worry about prompted food risks. The findings, aggregated across Europe are shown in table 1.

Table 1: What food risks are Europeans aware of (lay perceptions) and how much they worry about expert defined risks?

	Lay perceptions of risk			Expert defined risks	
Rank		% mentioned	Rank		% fairly or very worried
1	Chemical products, pesticides, toxic substances	17%	1	Pesticides	74%
2	Diet-related diseases	15%	2	Residues	71%
3	Food poisoning, bacteria	14%	3	Food quality and freshness	70%
4	Food quality and freshness	14%	4	Pollutants	70%
5	Additives, colouring, preservatives	11%	5	Additives	70%
6	Obesity, overweight	10%	6	*GMOs*	*67%*
7	Diet too high in fat, sugar or calories/ unbalanced diet	8%	7	*Cloning of animals*	*67%*
8	*No problem*	*8%*	8	*Food poisoning, bacteria (e.g. salmonella,listeria)*	*64%*
9	GMOs	7%	9	*Animal welfare*	*63%*
10	We do not know what we are eating/traceability	6%	10	New viruses	61%
11	Food is not natural/ industrial/ artificial	5%	11	*Diet-related diseases*	*61%*
12	Lack of sanitary controls/ hygiene	4%	12	*Plastics coming into contact*	*59%*
13	Digestive problems and discomforts	4%	13	*Nano-particles*	*56%*
14	Allergies	3%	14	*Unhealthy diet*	*53%*
15	New viruses	3%	15	Allergies	49%
16	Food prices	3%	16	*Putting on weight*	*49%*
17	Environmental concern	3%	17	BSE	46%
18	Hunger and poverty in the world	2%	18	*(No problem)*	1%
19	BSE	1%			
20	New technologies (e.g. animal cloning, nanotechnology)	1%			

The left hand columns show three broad categories of spontaneously mentioned food risks - chemicals, pesticides and additives; diet related diseases including obesity; and food quality and freshness. It is notable that the eighth most frequent comment is 'no problem'.

In terms of worrying about food risks the right hand columns show a similar pattern, with the exception of diet related diseases which drop from rank 2 in awareness to rank 11 on worry.

While the right hand columns (the typical method for assessing risk perception) might lead to the conclusion that Europeans live in a state of chronic worry about food, this is not supported by people's responses to the open-ended question. Here, people were 'matter of fact' and did not give an impression of suffering from food neurosis -gastro-anomie.We are conducting further work on the links between awareness and worry, but for the moment it does appear that chemicals, pesticide residues and additives are the European public's major concern.

3.2 Trust and confidence

Respondents were asked "*Suppose a serious food risk were found in a food you eat regularly such as fish, chicken or salad. How much confidence would you have in the following sources to give you accurate information about this risk?*"

Table 2 shows the percentages of respondents in selected countries who have confidence in the different actors. Here we find that the National and European Food Safety Authorities are the most trusted institutions and by contrast food manufacturers and supermarkets do not carry the confidence of a majority

of Europeans. That the Europe and National Food Safety Authorities((E)FSA) are held in higher confidence than 'national government' or 'European Institutions' suggests that the characteristics of competence, in the sense of expertise about food risks, are crucial to public confidence.

Table 2 Trust and confidence in producers and regulators

Country	Trust in food chain			Trust in regulators		
	Farmers	Food manufacturers	Supermarkets	National government	European institutions	(E)FSA
United Kingdom	67%	43%	48%	52%	48%	68%
EU	**61%**	**38%**	**35%**	**52%**	**65%**	**73%**
France	62%	26%	27%	39%	56%	69%
Germany	43%	23%	27%	47%	51%	58%
Italy	58%	41%	47%	46%	64%	67%
Latvia	62%	26%	25%	23%	62%	60%
Denmark	43%	31%	30%	66%	63%	72%

Table 3 looks at confidence in other sources of information. Again, the presumed competence and independence of medics, consumer organisations and environmental organisations are associated with high levels of public confidence. That the internet appears to carry relatively less public confidence needs to be interpreted with some caution. Here we need to take into account the structure of the survey question. 'information found on the internet' was the last item in this battery. From survey research we know that it is likely that respondents interpreted this item as 'information found on the internet from sources other than the above mentioned', i.e. not from health professionals, consumer organisations orfor example, trusted institutions that have prominent internet sites e.g. the BBC.Another issue for the internet may be relative weight of information in English as against other European languages.

Table 3: Trust and confidence in other sources of information

Country	Trust in informers				
	physician, doctors, health professionals	friends and family	information found on the internet	consumer organisations	environmental protection organisations
United Kingdom	90%	79%	35%	70%	61%
EU Mean	**87%**	**85%**	**42%**	**74%**	**70%**
France	92%	79%	29%	85%	76%
Germany	75%	82%	45%	81%	79%
Italy	75%	81%	44%	71%	69%
Latvia	76%	94%	38%	51%	57%
Denmark	93%	84%	54%	87%	75%

3.3 Segmenting Europe's public

Thus far we have looked at Europe as a whole and particular EU member states. But the public in the member states are far from homogeneous. That said, when we investigate the relations between the standard socio-demographic characteristics (gender, age and education) and issues such as food risk perception and trust and confidence in the regulators, analysis of the survey findings yield few interesting associations.

Another method of segmenting Europeans is cluster analysis which (tentatively) identifies ideal types characterised by shared beliefs and opinions. The personal characteristics included in the cluster analysis are:

- Generalised Risk Sensitivity – an index of worry about five personal risks- crime, health, accidents etc
- Engagement with food – the extent to which food plays an important part in the respondent's life.
- Food as stressor, food as pleasure – whether food is seen as a source of pleasure or stress
- Concern about contamination and adulteration
- Concern about diet
- Concern about health and illnesses
- Trust in the food chain
- Trust in food safety authorities
- Personal agency – an index of perceived personal control over food risks

Now, since the number of clusters (ideal types) is somewhat arbitrary we must not over interpret the findings. But as shown below – four clusters provide some interesting contrasts across the European population and between countries. For each cluster the percentage of people in EU27, the UK, Germany, Denmark and France is shown.

Cluster 1: 'Moderates' (EU: 39% UK: 35%; D:25%; DK:35%; F:34%)
Moderate levels of worry about food risks, perceive food as a source of stress somewhat more than a source of pleasure, believe they have agency, and have **moderate levels of confidence** in public authorities and trust in the food chain.

Cluster 2: 'Uninterested and trusting' (EU: 16% UK: 30%; D:40%; DK:19%; F:11%)
Low levels of worry about food risks and very low generalised risk sensitivity, relatively unengaged with food. For the 'uninterested and trusting' food is as much/little a source of pleasure as it is a source of stress. They have **high levels of confidence in authorities** and trust in the food chain.

Cluster 3: 'Relaxed enjoyers' (EU: 23% UK: 25%; D:7%; DK:32%; F:28)
Low levels of worry about food risks and relatively low generalised risk sensitivity. Food is first and foremost a source of pleasure, not a stressor. **Medium levels of trust in the food chain and authorities**, medium levels of perceived personal agency.

Cluster 4: 'Worried fatalists' (EU: 28% UK: 10%; D:28%; DK:14%; F:27%)
General very risk sensitive, very engaged with food and highly worried about food risks. Little trust in the food chain, **low confidence in public authorities** doing enough to protect them from these risks, and low perceived personal agency.

Looking across the four clusters and their representation in the different countries we see commonalities and divergences. While the 'moderates' are well represented in all countries, there are stark differences in the prevalence of 'worried fatalists' between the UK and Denmark on the one hand and Germany and France on the other. In Germany we find only 7% of 'relaxed enjoyers' and at the same time the highest percentage of 'uninterested and trusting'; does this point to a particular food culture?

One implication of this analysis is the recognition that the Food Safety Agencies work with different food cultures and publics with different concerns.

3.4 A second perspective on national risk sensitivities

As a complement to the cluster analysis described above we now take a second look at the unprompted awareness of problems and risks with food and eating outlined in paragraph 3.1 above.

For this we use Alceste, an advanced software computer package for the statistical analysis of textual data. The underlying assumption of Alceste is that different ways of thinking about a topic will produce different ways of talking about the topic under discussion. In other words the specific vocabulary used in the discussion is seen as a source for detecting ways of thinking about an object. ALCESTE aims to distinguish word classes which represent different forms of discourse on the topic.

The results of this analysis are presented in table 4. What this shows is the differential awareness of food risks and concerns in different countries. The percentages attached to the three categories of concern can be read as the relative awareness of the particular concern.

So, for Denmark we find that the majority of associations fall in the category of 'diet and health'. The second category is contamination and adulteration and there is no mention of food origins and safety. In France 'food origins and safety' is the largest category, followed by 'diet and health'. Germans are most likely to be aware of 'contamination and adulteration'. In both the UK and the Netherlands the dominant category is 'diet and health'.

Here again, is evidence of striking differences between European countries in the public's awareness of food and eating risks and problems.

Table 4: Country differences in the awareness of food risks

Country (% ECUs classified)	Contamination and adulteration	Food origins and safety controls	Diet and health
Denmark (76%)	**contamination & adulteration (19%)** genetic modification, animal medicine, pesticide, residue, additives, colourings		**chronic illness (29%)** blood, cancer, cardio, diabetes, obesity, allergy, cholesterol **hygiene and food poisoning (19%)** salmonella, bacteria, hygiene, food poisoning, control, preparation **conscious diet (32%)** fat, sugar, health
France (67%)	**contamination and adulteration (20%)** chemical, pesticide, preservatives, colouring, fat, additives, fertiliser	**origin, quality and price of food (47%)** quality, polluted, farm, diet, bad, organic, expensive, harmful	**diet-related illnesses (33%)** cancer, disease, cholesterol, diabetes, food poisoning, cardiovascular, allergy, heart
Germany (72%)	**contamination & adulteration (59%)** contamination, pesticide, genetically modified, meat, additives, antibiotic, fertiliser, environment, hormones	**uncertainty food contents (17%)** know, think, read, contain, label, trust, ingredients	**health and price conscious diet (24%)** health, pay, diet, attention, weight, expensive, afford, price
Latvia (72%)	**contamination and adulteration (26%)** harmful substances, additives, colourings, preservatives, unnatural, artificial **genetic modification (27%)**	**imported and poor quality food (23%)** low quality, import, origin, Latvia, fresh, high, price, **freshness of food (12%)** expiry date, best before	**food poisoning (13%)**
Netherlands (77%)	**additives (11%)** additives, artificial, colouring, E numbers, enhances, agents, sweeteners **contamination of meat (28%)** animal, antibiotics, meat, pesticides, pollut, hormones, welfare, dangerous	**freshness of food (15%)** out of date, rotten, poisonous, fresh	**diet-related illness (19%)** cancer, cardiovascular, diabetes, food poisoning, obesity, heart, cholesterol, diarrhoea **price - healthiness dilemma (27%)** think, health, unhealthy, cheap, cost
United Kingdom (67%)	**contamination and adulteration (19%)** additives, genetically modified, pesticides, chemical	**safety, hygiene, quality and origin of food (29%)** hygiene, cleanliness, fresh, quality, country, import, restaurant, food poisoning	**chronic illness (13%)** diabetes, disease, hearty, obesity, cholesterol **unhealthy food (17%)** fat, salmonella, allergy, sugar, alcohol, salt **conscious and healthy diet (15%)** diet, health, risk, balance, think, healthily, careful **safe preparation (8%)** sell, date, cook, proper, check, make sure

4. Conclusions and implications

There are three areas of concern about food risk in the public mind: contamination and adulteration; food quality and safety, and healthy diet and diet-related illnesses. This is universal across Europe, although in different countries the level of concern about these three categories varies considerably.

Scientists, Food Safety Authorities and European Institutions are trusted by a large majority of Europeans to give accurate information about serious food risks. Health professionals, family and friends, consumer and environmental protection organisations are also trusted. Trust in information found on the internet is very low across Europe. Within the food chain, only farmers are trusted according to the survey.

Greater trust in the European and National Food Safety Agencies is associated with lower concern about food risks.

When it comes to managing food-related risks, the majority of Europeans believe they can do things to protect themselves from a range of risks (personal agency) and also believe public authorities are doing enough to protect them.

However, about one third of the respondents are 'fatalists'. They feel that they lack both personal agency and have little trust in public authorities. Just over 10 percent feel there is not much they can do themselves, but feel they can rely on authorities to protect them. Another third of the respondents are 'individualists' who feel they can rely on themselves but not the authorities to protect them. The relative size of these four groupings varies depending on the type of food risk, and across countries.

On the basis of our review of the concept of trust, the perceived competence, independence and public service commitment of Food Safety Authorities appear to be key drivers of public confidence. In this context, risks such as pesticide residues, contaminants, chemicals and additives underline the need for independent and objective scientific analysis. (Yet, the continued public concern about GMOs shows that there are limits to public confidence in science). Reassurance about 'food origins and safety' requires regulatory oversight and enforcement.However, a particular challenge for Food Safety Authorities arises from sections of the public who are worried about 'diet and health' , consider that there is little they can do personally about it, and think the 'authorities' should be doing more to protect them.

References

Barber, B. (1983) The logic and limits of trust. New Brunswick: Rutgers UP.

Hirschmann, A. (1970) Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States. Cambridge, Mass.: HarvardUniversity Press.

Luhmann, N. (1998) "Familiarity, confidence, trust: Problems and alternatives". In D. Gambetta (Ed) Trust: Making and Breaking Cooperative Relations. Oxford, UK: Basil Blackwell.