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# **ORGANIC FOOD QUALITY & SAFETY PERCEPTION THROUGHOUT EUROPE**

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# ORGANIC FOOD QUALITY & SAFETY PERCEPTION THROUGHOUT EUROPE\*

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**Abstract.** Many more consumers have tried at least once organic food, but despite higher consumer awareness, they still show a great concern about food quality and safety. Recent research showed that there is still little knowledge of how organic products are produced and processed and which characteristics are fundamental for the consumer with regard to quality and safety. In this scenario, primary producers, processors and other stakeholders in the organic supply-chain have the difficult task of understanding consumers' complex and sometimes contradictory wishes with regard to organic food. The aim of this study is to examine food quality and safety issues related to buying organic products. To provide better insight on the safety and quality issues in a cross-cultural setting, the linkages among consumer's personal values – as final expression of consumer product knowledge - are analysed, by means of laddering data on 8 EU countries.

**Keywords :** laddering, food safety, food quality, cross cultural study, values.

## 1. Introduction

In the recent years, food quality and safety have been attaining a growing importance, both in consumers mind and in marketing research. A number of reasons, not completely investigated, have driven this market trend. One of the most accredited explanations assigns the main responsibility of the emerging interest in quality and safety issues to the various food scandals, and the consequential food scares that have emerged throughout Europe. Indeed, BSE influenced the perception of organic food during its main outburst, but did not seem to represent an enduring factor that explains the continuous growth of organic food consumption in the subsequent years. To a certain extent, the growth of organic demand can be better ascribed to other 'external factors'<sup>[1]</sup>: the increased availability of a wide range of organic foods in large conventional retail channels coupled to a higher consumer product awareness because of the launch of highly promoted logos (e.g. the BIO-Siegel in Germany). Similarly, "organic" scandals like the Nitrofen case in Germany (which indeed was due to the contamination of an old warehouse in Eastern Germany and therefore left the organic industry

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\* This paper is a joint effort of the two authors and results have been analysed and discussed together. However, S. Naspetti has written paragraph 1, R. Zanoli paragraph 2, while the remaining parts are common.

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cleared of any wrongdoing), is not the main reason behind the consumption slowdown experienced in that country, which can partially ascribed to the increasing price sensitivity of German consumers when it comes to food purchases, given the recessionary condition of the German economy <sup>[2]</sup>.

Despite massive growth in the end of the last century, consumer demand for organic food is still very low in Europe, if we exclude the Nordic and German-speaking countries <sup>[3]</sup>. And consumers, besides becoming more and more concerned about the safety and quality of food they are eating, do not completely trust organic food. They feel unsure about organic quality and quality signs – acting as both search and credence product attributes <sup>[4]</sup>.

The aim of this study <sup>1</sup> is to examine food quality and safety issues related to buying organic products. In order to do so, organic consumers' value structures are analysed to uncover cross-cultural differences in 8 EU countries.

In the remain of this study we will try to answer to the following research questions:

Question 1: Are food quality and safety two separable constructs as regards to organic product consumption?

Question 2: With respect to organic food, do consumer basic ends (values) differ according to country and/or product category?

### **1.1. Background**

According to Schwartz <sup>[5]</sup>, human values are “concepts or beliefs about desirable end states or behaviours that transcend specific situations, guide the selection or evaluation of behaviour and events, and are ordered by relative importance”. Terminal values reflect end states – e.g., happiness or freedom, while instrumental values reflect ways of behaving to reach the end values – e.g., behaving honestly, or accepting responsibility.

People choices and behaviours are often significantly influenced by values <sup>[6]</sup>. Some individuals, for example, seek “accomplishment” and would like to have e.g. a new mobile phone because they want to increase their efficiency at work. Others link the same product to the same value, but follow a different “logical”/cognitive path. Their final goal – accomplishment – is pursued by using the mobile to keep in contact with a large group of “peers”, which they want to be part of. When we analyse consumer choices with respect to organic food purchases, we often elicit the need/goal of maintaining health; but often this value is not pursued for its own sake, but rather as instrumental to hierarchically higher values/goals e.g. quality of life and wellbeing <sup>[4], [7]</sup>.

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<sup>1</sup> The study is based on a global reanalysis of data from a previous qualitative survey <sup>[4]</sup>, carried out in 8 European Countries (Austria, Denmark, Finland, France, Germany, Great Britain, Italy and Switzerland).

Core values, that is the most central elements of consumers' cognitive structure, exert more influence on consumer behaviour and are more deeply held than peripheral ones <sup>[8]</sup>. Thus, a person may highly value health which appears to her one of the most relevant goals in life, but only sometimes think of not drinking alcoholics. Her core set of values would therefore include having good relationship with others or having a gourmet- lifestyle, while health could be a peripheral value for her.

The marketing literature also suggest that the cultural environment does not just have an influence on the choice criteria used by consumers, but affect motivations and values in different ways in each country <sup>[9]</sup>.

Albeit both consumers and producers are becoming more and more concerned about food quality and safety, the organic food sector experiences increasing complexity in achieving adequate standards of both <sup>[10]</sup>.

Safety, broadly refers to the health value, and is generally experienced by consumers as a binary, pass/fail attribute of the food product. In terms of consumer decision- making, if a product is not safe, it will not be purchased and consumed. At the same time, consumers have cognitive difficulties in separating this construct from quality, and often safety is referred to as a quality dimension of (organic) food.

Quality is a broader, more complex, and vague construct. In general, consumers consider quality an ordinal concept that varies in degree more than kind. Consumers prefer high quality product to low quality ones, but may accept to trade off higher quality for lower prices, which is not the case when safety is concerned.

## **2. Material and Methods**

Laddering interviewing technique was used to reveal consumers' goals and motivations in purchasing an organic food product. Means- end chains, that are sequences of connections of product- related and personal- related meanings, were identified which explicitly link product characteristics and consumer basic ends or values. Understanding of the consumer purchasing process and their perception of the product is made possible by these associative networks of concepts. During face to face interviews lasting between one and two hours, consumers were asked to reveal relevant product characteristics and to build their means- end chain by laddering in response to a simple iterative question ("Why this is important for you?"). Consumers were asked to build ladders for four different product categories – dairy products, fruit and vegetables, cereals and pasta, and meat products; and on preferred and disliked point of purchase, and on quality marks, too.

### **2.1. Sampling**

A total of 792 interviews were completed in Europe in 2002 in 8 EU countries (AT, CH, DE, DK, FI, FR, IT, UK), varying between 85 and 104 per country, according to different interview completion rate. Both consumers

and non-consumers of organic products were interviewed in similar proportions. Other criteria for recruiting and quotas were: type of residential area (at least 30% rural and the rest urban), preferred point of purchase (at least one third of interviewees purchasing in each of the following: direct marketing outlets, organic specialty shops and Supermarkets) and shopping habits (at least 1/3 during the weekend or on weekdays).

## 2.2. Data analysis

All researchers, in each country, transcribed their laddering interviews. These data were originally coded by two independent teams in terms of attribute, consequence or values after interviewers extracted relevant chunks of meaning from verbatim transcripts. These allowed aggregate ladder-maps to be drawn for each country involved, and general tendencies for the whole group of European countries was done on a country-by-country level<sup>[4]</sup>.

In the following sections we report the results of an overall (European) re-analysis of the original data. Data were re-coded centrally in order to create aggregated European Hierarchical Value Maps (HVMs), which are the graphical representations of the condensed means-end chains. A new software package called MECAnalystPlus was used, which facilitated the processing of the large volumes of data involved<sup>2</sup>. OMIARD final country reports and relevant maps were eventually used to integrate the general analysis with specific results at the national level. The analyses reported here represent just an excerpt of the whole investigation. Organic food choices are explored using means-end theory only considering consumers' product quality and safety perceptions. According to the theory, results are basically to be discussed using complete associations connecting different levels – attributes, consequences and values. However, product characteristics and benefits can be explored in more depth in order to provide a deeper insight into organic food quality and safety builders, while values are analysed in order to uncover cross-cultural differences and similarities.

At the aggregate level, four matrixes of the individual ladders of regular consumers for each of the four product categories investigated (varying between 690 and 1630 ladder per product) were produced by means of MecAnalystPlus Ladder vector function.

Simple correspondence analysis was used to analyse the contingency tables based on an aggregation of each of the Ladder matrixes: on the rows were represented the 8 countries analysed while the number of columns – representing the values coded and extracted from the ladders – varied according to each product category. Each table represents a cross-tabulation of the frequencies of values elicited in each country for the specific product category.

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<sup>2</sup> The software was jointly developed by the authors, in cooperation with Skymax- DG (<http://www.skymax-dg.com/mecanalyst/index.html>). The previously existing software was limited in terms of the volume of interview data which could be simultaneously analysed.

In order to address the relationships between countries and values, symmetrical normalization was used. Solutions were obtained for two, three and four dimensions, with accounted-for cumulative proportion of inertia as reported in table 1:

**Table 1.** Cumulative proportion of inertia per product category

Dimensions	Cumulative proportion of inertia			
	Fruit & veg	Bread	Dairy	Meat
2	0,615	0,658	0,633	0,612
3	0,615	0,854	0,794	0,797
4	0,888	0,938	0,897	0,878

A two-dimensional representation was used and biplots of row and column scores were produced by SPSS.

### 3. Results

Both occasional and regular consumers seem to give high importance to hedonic and health values related to organic products. These values are differently linked to sensory, nutritional and quality characteristics of the product by the two different groups. Current organic product positioning, usually pursued with a general symbolic reference to the need/goal of maintaining health<sup>[11]</sup>, seems to better fit regular consumers. This group of consumers relates “organic” credence attributes mainly to health and safety values and therefore attaches importance to these attributes, whereas non-regular consumers also consider other factors such as taste or place of purchase.

#### 3.1. Organic food quality

The way consumers make food choices can be complex and vary widely, but as Brunso and colleagues<sup>[12]</sup> (2002) postulated, there seem to be four quite universal dimensions in quality perception: taste and appearance, health, convenience and process. In accord with previous cognitive studies (e.g.<sup>[7]</sup>Zanoli and Naspetti, 2002), when making reference to general motivations for buying organic products, European consumers mention above all aspects associated with health and well-being. With respect to all other aspects, health and healthiness is clearly the most relevant quality characteristic of organic products but it is also an important benefit and value for consumers.

All countries focus on this “credence quality”, that is, on product characteristics that can be barely ascertained by consumers<sup>[13]</sup>. This interest in the **health** issue is not unexpected and can be verified in all the European maps, both country-specific and aggregated, by looking at the similar path of the most important chain: *less additives\_chemicals* →

*naturally produced* → *eating healthily* → *Avoid health problems, Staying healthy*<sup>3</sup> leading in various ways to *Own health* and *Well-being*. At the attribute level, organic consumers show a striking difference in their reasoning when judging different food categories. Health-related aspects (that is, characteristics that consumers mention when thinking to different organic products) do not show the same level of concern about production and processing of food. Organic foods are widely perceived as being produced without chemicals, using a natural production process, making it possible to avoid substances harmful to health, and to eat products with a minimum of additives. However, healthiness is also influenced by the nutrient content of foods and by animal welfare. Animal-based food products – dairy and meat products – are above all influenced by the latter, while fruit, vegetable and cereal products are related to the idea of an additional nutritional value (*contain vitamins/minerals and/or wholesome and/or have a nourishing meal*).

Health characteristics of dairy and meat products are differently perceived throughout Europe. Health is mainly related to how the organic food has been produced and processed (*naturally produced* since it contains less chemical additives, *natural and healthy fodder, less hormones/drugs*), but in northern Europe – as reported by Naspetti (2001)<sup>[14]</sup> and Miele and Parisi <sup>[15]</sup> (2001) – consumers show different concerns about animal rights and **animal welfare** issues (*appropriate husbandry, animals can move free, animal welfare*). In Italy, Austria and France, consumers rarely put animal welfare among their food concerns; they mostly refer to animal well-being because of the impact that the life of the animal can have on human health. The relationship between animals and health is reiterated in the consumer requirements for healthier and tastier products <sup>[15]</sup>. On the other hand, there are countries (CH, DK and FI for dairy products, DE for meat) reporting solely ethical considerations related to animal conditions, and also some (DE and GB for dairy products, AT, DK and FR for meat) where animal rights are on par with concerns for human health.

**Nutrient content** is another quality aspect that consumers link to personal health, but it is a secondary one. Organic consumer perspective is clearly referred to the perceived nutritional effects and does not reflect the nutritionist perspective<sup>[12]</sup>: high content of vitamins and minerals, more nourishing meals and a healthy diet are reported by 4% to 7% of regular consumers<sup>4</sup>. This is particularly true, in Southern Europe, for cereals (pasta and bread) and for fruit and vegetables. The latest group of products is seen as more *wholesome* or with *more vitamins/minerals* in Switzerland and France. In Italy vitamin content also contributes to a nourishing meal (“I have a right contribution of vitamins in organic fruits”). Northern countries also mention nutritional aspects (“Vegetables don't loose valuable substances” – DE) but the single codes do not appear

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<sup>3</sup> The aggregate HVMs showing the means- end chains are available by request from the Authors. Single codes are in italic when mentioned in this paper.

<sup>4</sup>Self-reported frequency of purchase was used to measure organic product experience and so to distinguish between self-reported regular consumers and other groups.



into their final maps, showing a lower interest into this matter. Organic pasta and bread “have a better nutritional value” only in Italy and Austria. Occasional consumers seem uninterested in these issues; they have even less insight into the nutritional questions, which is probably connected with their lower levels of experience and knowledge<sup>[7]</sup>.

Moreover, sensory attributes and their respective chains (ladders) are perceived in a different way by the two groups of consumers. Among these quality aspects taste is the most relevant “experience” characteristic since food is primarily a matter of pleasure. Both regular and non-regular organic consumers perceive this, and, also, have taste expectations.

For the first group, the taste experience (*tastes good*) is usually connected with the authenticity of the taste (*real/genuine taste*), and the idea of a “broad” *good quality* (“the process of organic production and processing leads to high quality”). The results from the in-depth analysis of consumer motivation show how *real/genuine taste* and *good texture* are among the most important attributes that give regular consumers pleasure when eating organic products. These consumers show an implicit confidence in the **better taste** of organic food, probably supported by positive experiences. However, there is little still scientific evidence concerning the actual superiority of organic products with respect to the conventional ones, at least for occasional consumers<sup>[16]</sup>.

Occasional consumers are also attracted by personal satisfaction: they want the product to taste and look good as well, but they have doubts about organic food quality. They mention that poor taste associated with the organic experience and that conventional foods are of high quality (*good quality of conventional products*).

Lack of **freshness** (*not fresh*) is an important quality cue that consumers use to infer food quality, especially in relation to fruit and vegetables. **Product appearance** is the means consumers use to evaluate taste: “organic vegetables seem like they have been picked a long time ago and seem less appetizing” according to a Swiss consumer. Product aesthetics and freshness for 11% and 18% of consumers, respectively, have an influence on expected taste experience (*tastes bad*).

Organic dairy products are considered to have poor taste by 5% of the total of interviewees, but no visual sign (packaging, brand, etc.) emerged from the analysis interview transcripts. Also, product consistency (*good texture*), which is usually used to infer yogurt and milk taste, is neither on the final map nor in country maps, revealing and confirming the low importance accorded to the sensory experience of these products when compared to other product barriers.<sup>5</sup>

Somewhat different is the situation when consumers choose organic cereal products. Organic food taste is the second main barrier, just after price. Important links are mentioned by quite a high proportion of interviewees. Consumers are dissatisfied by the poor taste (in 19% of the

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<sup>5</sup> Price availability and knowledge are the main factors influencing the demand of organic livestock products in Europe.

cases) of organic wholemeal products. Especially *wholemeal pasta* is the (observable) quality criterion used to infer taste; since they dislike it they avoid organic pasta, where wholemeal is the predominant product form.

The taste experience has a different significance throughout the European countries where laddering interviews were carried out. This hedonic dimension of food led to enjoyment while eating in most of the countries investigated (AT, CH, DK, FR, DE, IT), and can be traced back to a desire for the *real/genuine taste* of organic food but also to other “perceived” characteristics. Interviewees address good taste (*tastes good*) by referring to non-sensory characteristics. Health considerations (*less additives/chemicals*) and a “**natural production process**” (*naturally produced*) are appreciated. Organic consumers especially appreciate that surpluses of dairy products are not recycled, that the natural rhythms of growth are respected (fruit and vegetables) and that sourdough is used to produce bread and low temperature processing for pasta (cereals).

Only when satisfaction is obtained through the product's sensory characteristics, a cognitive link is produced that addresses hedonistic motivations – (*feel pleasure, feel good, happiness, inner harmony or personal development*). In Latin countries food has a high social connotation, in the sense that people consider socially important to serve and eat good food sharing the pleasure of eating with other people. Organic products are accepted as long as they “taste good” and are often not recognised as such. In Northern countries organic food is generally accepted as having a “genuine taste” and a better “texture” [4]

The **convenience** quality dimension is usually related to time-saving and less effort in cooking for the household, and appears to be a more important issue for occasional than for regular consumers. Both groups mention the advantages of having products which make purchase, storage and preparation easier and quicker (“keeps longer, so that they are more practical” – regular AT, “products of good quality keeps longer so it is going to be used totally” – occasional FI). Less experienced consumers seem to be more worried about having to change habitual food purchase and eating behaviour (*use habitual shop/product*): “I buy just what I’m used to buying”, according to an occasional Italian consumer. Poor availability (*not easily available* and *not available in habitual shop*) is a relevant barrier, but the importance of specific concepts is different. Strong regional differences affect organic purchases with regard to the availability of organic food in general and to specific product categories. In Italy, despite the fact that organic products are available on the shelves of 95% of supermarkets and that most large retail chains have their own-brand for organic products, the range of products sold is not very wide and so consumers complain about the issue of availability.

In other countries the availability of certain products is poor, and also quality is not so attractive as compared to other products. Maps of cereal products in Great Britain, but also the small number of consumers investigated for meat products in Finland, Italy and Great Britain, reflect the status of these organic products in those countries: not sold until

recently, they yet to establish a presence. Local and conventional products are an excellent alternative to the organic choice (respectively, in at least 9% and 12% of the cases) and their prices are lower. Local origin (*local/regional products*) of dairy products is particularly appreciated by Austrian consumers, who are convinced that they can eat healthily as a result.

### 3.2. Organic food safety

If we go beyond the health considerations covered in the previous section, food safety seems to be linked not only to consumers' risk perception of introducing "harmful substances" (*eating healthily*) through their diet, but also to a lack of trust in the organic supply chain.

The perception of risk is influenced by a generalised health concern and only exceptionally by the presence of a real safety problem. Consumer choices show a clear fear of eating unhealthy products, since they believe they contain poisons (*less chemicals/pesticide/fertilizers*) that accumulate in their body (*Avoid worries/feel safe*). But food scares and health problems (*avoid food intolerances/allergies*) - despite being coded in some countries, for example in Italy and UK – do not appear in any of the cognitive maps<sup>6</sup>, showing how small is the influence of these factors on immediate consumer behaviour. In this sense **food safety** can be considered as a 'sleeping criterion' which is not a dominant motivation in normal conditions<sup>[17]</sup>.

Nevertheless, laddering analysis shows that there is a generic feeling of healthiness associated to organic food ("I buy all my organic products for health" – FR). And there are a growing number of people citing health as reasons for their interest in organic products. This is not only due to their desire for a healthy life but also in order to avoid specific health troubles: for example, "I can avoid getting cancer", so "as to avoid illnesses"; "...for my digestive system, I don't have problems".

With respect to safety, consumers express anxieties not only with regard to the use of agrochemicals. They also choose organic food in order to avoid use of hormones and medicines in animal production (*less drugs/hormones in animal production*), of GMOs, and artificial additives (*less additives/chemicals*) in fruit and vegetables.

But safety, in many cases, is influenced by other key factors affecting consumer orientation. It is mainly a matter of **trust**: in the point of purchase, in the producer/processor and their methods of production, in the inspection and certification system, and in local, regional and/or national products.

Safety of food is very important when shopping for organic products, whatever the shopping outlet<sup>[4]</sup>. European consumers of these products seem to unenthusiastic in their support for mass-market structures, mainly for reasons which are linked with their main motivations of health and well-being, and the entire retail channel probably requires to make a

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<sup>6</sup> Maps referred to "special situations for buying" (see <sup>[4]</sup>Zanoli, 2004)

better response to these consumer expectations. Rejecting the idea that all food in supermarkets is safe <sup>[17]</sup>, they turn to organic and local shops for their organic purchases.

In general consumers seem unaware about production and processing methods and ask for more information. “Local (national) food products avoiding long transportation” (AT) are often related to the issue of trust and safety. Two different considerations emerge from the desire elicited from transcripts to know the origin of the product. In some countries, for example dairy products in Austria, consumers seem to be proud of the quality of their food production. In others, consumers seem to place more trust when the place of production is closer; they want to evaluate the quality of the product based on personal experience of the producer (*can personally verify*). But there is also another facet of product origin. Occasional consumers, especially those living in the countryside, often say they are not interested in buying organic products since they produce home grown vegetables and fruit and can be much more certain about food safety (*eating healthily*). These consumers seem to be more sceptical towards organic produce, and are also less interested in food certification, perhaps due to the lack of information.

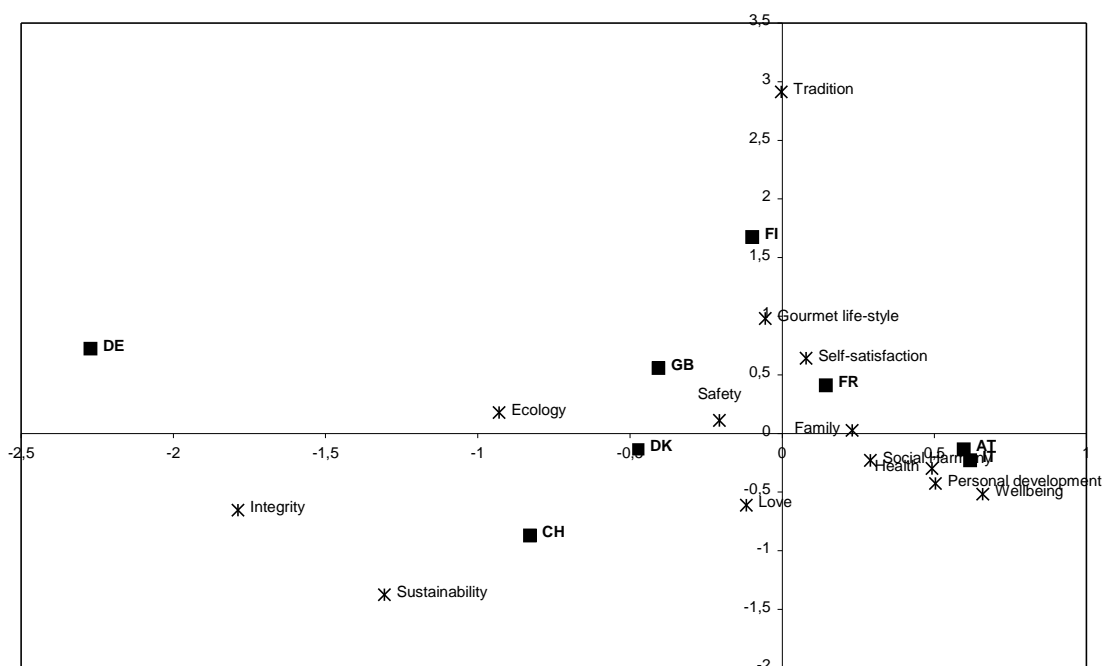
Responding to consumers’ information needs appears as a key factor in the solution to the trust issue<sup>[4]</sup> Vergunst<sup>[18]</sup>(2001) describes local food systems as a replacement of impersonal exchange with personal relationships of trust. However, trust in local food systems might also be generated because of the confidence in a familiar social structure, rather than in individuals who are known directly. In this sense, better communication and more transparent inspection and certification systems could increase consumers’ trust, which can be inferred from the analysis of the OMIaRD European maps.

### **3.3. Cross- cultural value comparisons**

In order to analyse cross- cultural similarities and differences in the attachment of value to the four organic product categories investigated, we have used correspondence analysis as a way of presenting results in maps (bi- plots) in which categories can be analysed by their proximities not only within but also across rows and columns. Four (one per product category) two- dimensional plots were generated. They illustrate the relationship between two different variables: countries, with eight categories (AT, CH, DE, DK, FI, FR, IT, UK) and values, with a different range of categories per product (15 values maximum). In all the plots, vertical and horizontal dimensions explain the relative distances between variables and/or categories. As a general rule, distances are dissimilarities, proximities similarities. Categories very close to the origin describe the average profile: the core values and the average country. Categories located very far from the origin are the most dissimilar. Besides, similar categories are those closer to each other in any side of the plot. As a consequence, it is easy to identify which categories of the two variables – countries and values – are more related, and also when

connections happen between two, or more, similar categories of the same variable (e.g. AT and IT, or Ecology and Sustainability).

All maps describe a significant cross-cultural influence of consumer values and a deep heterogeneity among countries per product. Value associations common to all countries are placed in the middle of the map, close to the origin. Most of the maps show a common shared group of values (Figures 1 to 4). For example, *Well-being* (terminal value) and *Self-satisfaction* (instrumental value) are both quite central in all the four maps. *Well-being*, in particular, is a goal that combines both the safety & quality issues in one word, and is less semantically connected with the idea of disease [11]. Although *Health* is still a relatively central (core) value for all product categories except bread and cereals, it is more peripheral than *well-being*. *Health* and *Safety* appear generally quite distant at the value level, indicating that they are not at all perceived as synonyms. Higher safety is a precondition for healthy life, but safety is perceived as more peripheral and probably is not always fully associated to organic food products, if we exclude the fruit & vegetable category, for which *Safety* is apparently the core value closest to the origin<sup>7</sup>.



**Figure 1.** Country values perception: fruit & vegetables products

Globally analysed, maps show more country differences than similarities, although often many of the countries are not distant to the origin of the axes and therefore to the average country profile.

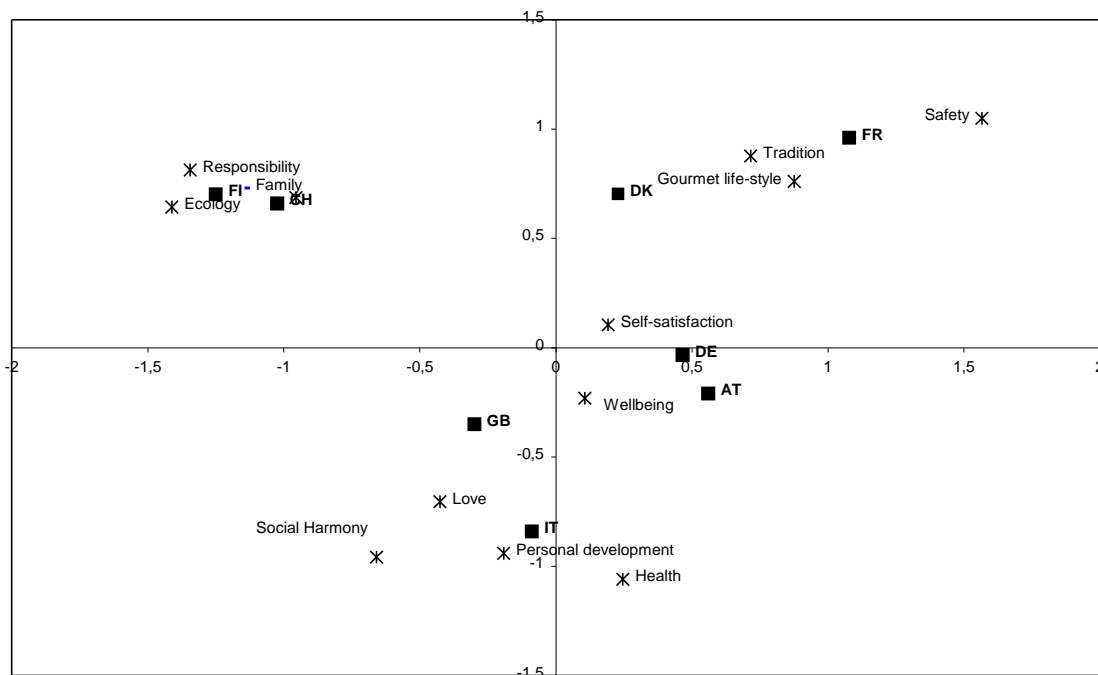
For organic fruit and vegetables (figure 1), Germany is on the left alone, and is not associated closely to any specific value. Finland and Switzerland too are relatively different, especially in terms of the vertical

<sup>7</sup> As was already discussed, *Safety* is probably more closely related with the positive consequence/benefit *Trust*.

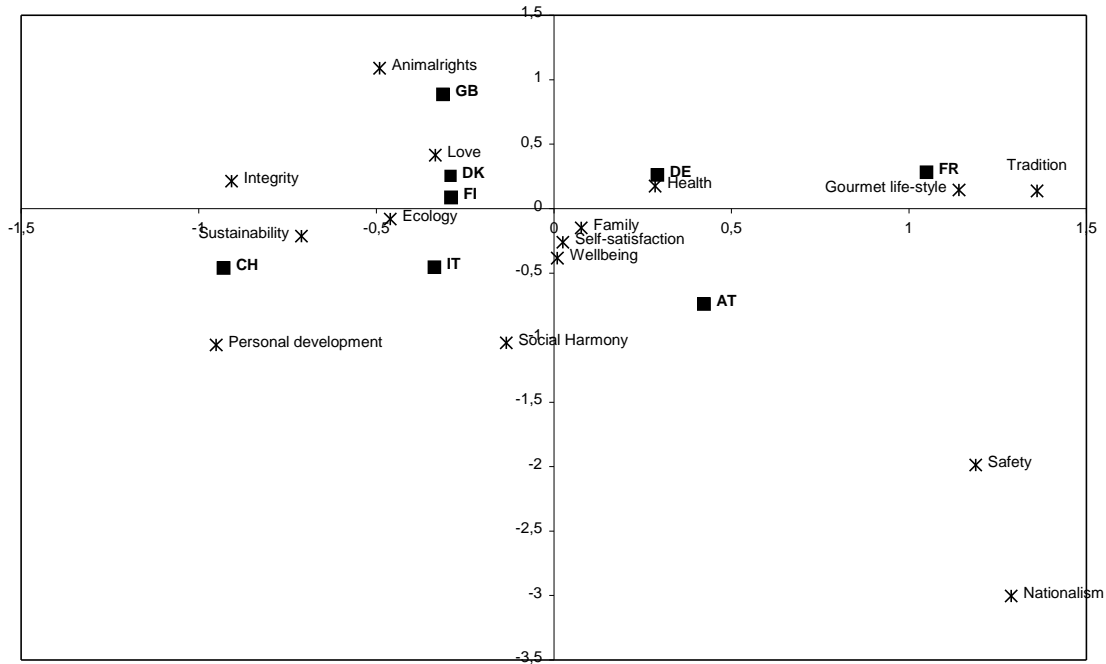
dimension. On the other hand, Austria and Italy are very similar, and closely associated to the values *Health* and *Well-being*.

Figure 2 show the results of correspondence analysis on bread and cereals. Countries are quite spread across both dimensions. AT and DE – German speaking countries – are shown as a cluster, and are relatively close to the average profile and to the self-enhancement values *Wellbeing* and *Self-satisfaction*. FI and CH are also forming a small cluster and are associated to self-transcendent values [5]. In these countries, regular consumers of organic cereal products associate their consumption behaviour to environmental protection as a way of expressing responsibility for their families and for future generations. FR and DK appear close only in terms of the vertical dimension; however, French and Danish organic bread consumers both associate their purchasing behaviour to respect of *Tradition* and *Gourmet-lifestyle*.

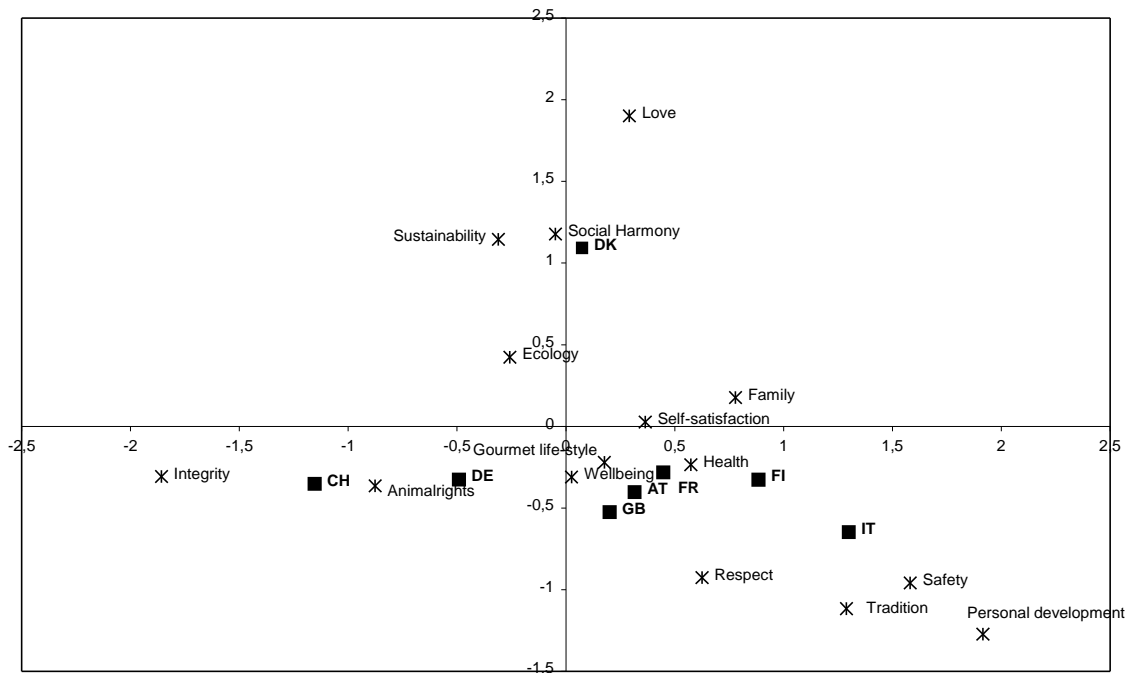
For organic dairy products (figure 3) we have that GB, DK, FI and IT differ only in terms of the vertical dimension. Consumers from the two Nordic countries express the most central and similar pattern, and are associated with self-transcendent values such as *Love* and *Ecology*. German consumers associate organic dairy product with the core value *Health*, while French express their cheese-culture by aiming to products that conjugate authentic and traditional flavours together with organic quality, expressing their well-known *Gourmet culture* and attachment to bread-making *Traditions* [3].



**Figure 2.** Country values perception: bread & cereals products



**Figure 3.** Country values perception: dairy products



**Figure 4.** Country values perception: meat products

Figure 4 represents the value perceptions for organic meat. Most of the countries are quite homogeneous in terms of the vertical dimension and differ only according to the horizontal one. One exception is DK, which is relatively central in terms of the horizontal dimension but distinguishes itself markedly from the others in terms of the vertical dimension. Danish consumers, as usual with the exception of bread and cereals, appear to give importance to self-transcendent values such as Ecology,

Sustainability, Love and Social Harmony. Italy is relatively alone in the bottom right of the bi-plot, and is relatively closer than other countries to the *Safety* value. Its disperse position, can be ascribed to the slow development of the organic meat market in the country, and the relevance of safety concerns in motivating organic meta consumption in Italy.. The plot shows at least two others country sub-groups. The more concentrated one, including four countries (AT, FR, GB and FI), is the most central, and express an average value-profile, dominated by *Wellbeing*, *Health* and *Gourmet life-style*. The second group – less homogeneous – encloses again two of the German-speaking countries. This countries support animal rights and environmental values with different prominence. Animal welfare is more central in DE and CH consumer values.

## 5. Conclusions

The results of our research – similarly with most of the studies inquiring on food quality <sup>[19], [20], [21], [21], [22] [10] [17]</sup> – indicate that quality dimensions and considerations are among the most important aspects in any food purchase, including organic ones. However, average organic consumers usually connect quality to health, and much less to safety, and don't have a separate organic food quality perception.

Despite higher consumer awareness in organic food, product knowledge still appears low for occasional as well as regular consumers. Our research showed that there is still little knowledge of how organic products are produced and processed and which characteristics are fundamental for the consumer with regard to quality and safety.

Consequently, primary producers, processors and other stakeholders in the organic supply chain have the difficult task of understanding consumers' complex, vague and sometimes contradictory requirements with regard to organic food quality. In order to understand these needs and to find out how to translate different conceptions of quality attributes and food safety into practice, it is necessary to explore quality standards much more in depth. The need also emerges to solve existing gaps among different actors in the organic food chain and to determine which of these aspects can be fulfilled in a profitable way <sup>[12]</sup>.

For example, people associate organic food with a natural process and with food products that are either unprocessed or at least have a low level of processing, but modern lifestyles demand convenience products. Improving consumers' choice options when a product is healthy or a production method is natural could help to satisfy consumers' needs as well as reward producers' efforts. As common consumers will probability never become skilled "evaluators" of food, it is necessary to discover the simple indicators that they use to infer quality.

With regard to safety, our research clearly shows that consumers conceive it as a value of its own rather than as an attribute of (organic) food: this is our preliminary answer to Question 1. They associate food safety with anxieties about possibly harmful substances but they almost express no



real concern about a real health risk. There is a need to clarify whether this behaviour is linked to specific products – as Bredhal emphasised with regard to GMO products or to different production systems <sup>[23]</sup>. At the attribute level, safety is linked to the benefit *Trust*. At the value level, *Safety* appears to be a rather marginal and peripheral value for most of the product categories in all countries, with the exception of fruit and vegetables. Consumers have also become more interested in the local orientation as well as in the origin labels of organic food, due to the increased perceived distance of production from final consumption <sup>[23]</sup>. Further investigations should try to understand which safety cues are used by the consumers during these organic local food purchases, how to solve their mistrust and how safety (and quality) issues could be better approached in a “*from farm to fork*” integrated approach to product value delivery.

The results of the correspondence analysis allow us to answer to our initial Question 2 by observing that countries differ in terms of how personal-relevant values are associated to different product categories. However, there is a small central, core group of values shared by all countries across all product categories (including *Well-being*, *Self-satisfaction* and, in most cases, *Health*), while all others are culture and product dependent.

Our analysis substantially confirms our recent reflection on the need for a new positioning of organic products <sup>[11]</sup>. A positioning based on the well-being value – eventually extended into a **wellness** concept embracing *Self-Satisfaction* and *Health* – could be the way forward, since it would encompass all the core values that – in cognitive terms - represent the enduring appeal of organic food, and could trigger higher consumer involvement and loyalty.

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