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Quality dimensions as an analytical tool to study food networks and development trajectories – A Pirsigian based framework illustrated by Danish organic food chains

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Introduction

This paper includes some reflections upon the main theme of this working group: That the different trajectories of European organics are strongly linked to different development pathways in the food networks, and how this question could be interrogated.

These reflections are well in line with the idea of the organic movement, where one of the fundamental aims of the movement of organic farming is the worldwide adoption of ecologically, socially and economically sound systems that are based on the principles of organic agriculture, and one of the five major goals or means to fulfil this mission is to promote the development of the organic market.

In relation to this there are three major characteristics of organic food, which makes it an interesting case to examine in order to understand the development of markets and food networks for distinctive quality products. These three characteristics are:

One: Organic food starts with and has its foundation in the primary production; “Organic” begins at the farm in the field and in the stable. Other qualities can be added to the food items through processing and marketing, but there are no legal/acceptable ways that the quality “organic” can be added in the processing link of the chain. However, the food items can lose the quality of organic or some of the other qualities in the later relations in the food chain. Organic milk may be merged by conventional milk in the lorry, due to the technical/economical consideration of the dairy, and processed and sold as conventional milk. An organic apple may be made into juice because it does not meet the quality relations standard between wholesaler and retailer, e.g. because the retailer are selling the apples per piece instead of weight. So the organic quality can only be supported, spoiled or disjointed in the chain, not added.

Two: Organic food production is protected and restricted by international and national rules, but refers to a much larger body of ideology and values, concerning a range of quality dimensions, lately described in the four principles (IFOAM). An element of this is that IFOAM is an organisation for both producers and consumers. The organic certification is constructed as a means to give administrative subsidies and to mediate between producers and consumers in larger food chains. But organic refers to a lot of dimensions of qualities that are not necessarily secured by the rules.

Three: Organic agriculture builds on the core idea of a market relationship between the producers and consumers, both for economical and ideological reasons. For the ideological reasons, to commit all people in the aim to develop a more sustainable way of living in the world, and thereby to mediate these values the whole way through, from what is going on in the field to how it is eaten from the table. For the economical reasons because, it is more expensive to produce food organically due to the rules, not allowing the use of chemicals and artificial fertiliser, and there are also restrictions in the processing line that makes organic food more expensive. This means that the consumers have to pay more for food produced organically than similar conventional products. Therefore, the dissemination and extension of organic farming in the world is very much related to the development of the organic market and thereby the consumer producer relation.

The proposition of this paper is that a deeper understanding of how the values of organic food are mediated in different food chains, and what this means for the producer consumer relationships, can on one hand help to understand the different development pathways of organic farming in various parts in Europe, and on the other hand help the involved actors in developing and improving the food networks of organic food, two sides of the same coin.

The aim of this paper is to present a theoretical and analytical framework and tool to examine how the values of organic food are mediated between producers and consumers, and how this is linked to the way the food chain is constructed, who is involved, and the way the market is developed.

This framework is based on Pirsig's relationary notion on qualities as the primary empirical reality of the world (Pirsig 1991 p.76, Alrøe and Kristensen 2003, p. 76f). This basic assumption will be developed upon below. The theoretical and methodological framework developed in this paper shall be seen as an element in a larger theoretical framework with semiotics as the main corner stone (Noe and Alrøe 2006, Alrøe and Noe 2008).

A few Danish cases explored in an EU-project on farmers collective marketing strategies, will be outlined to illustrate the methodology and support the discussion of possibilities and perspectives. A larger empirical study is out of range in the context of this paper, but will hopefully be possible to obtain in the future.

Theoretical framework and analytical tool

The idea of the analytical framework presented here, was conceived during case studies within an ongoing EU-project on farmer's collective marketing strategy (COFAMI 2007). Our experiences were that there was a strong connection between the way the food items were produced, the marketing strategy and the way the food items were mediated through out the food chain to the table of the consumers. This gave us the idea that the analytical units of such studies could be how the quality(ies) of a certain food item were handled by and mediated between the farmer and the consumer and the different links in between these two positions.

However the notions of quality, value and relation are everyday notions that are applied in many different senses and meanings. To make it into an analytical tool we need to use some space to define how these notions are understood in this paper.

In this paper we start from the Pirsigian notion of qualities as the primary reality of the world. The extreme strength of this assumption is that it radically breaks with our habits of thinking and therefore forces us to take a completely different empirical position. Pirsig's point is that he wants to break fundamentally with the scientific tradition of describing the world objectively as a number of objects and seeing the relation between the subject and object as secondary. Pirsig claims that before value relations there are no objects or subjects. Therefore a value can be defined as an unity of a subject and object (or a unity of two actants in ANT terminology). One of the major challenges of making such a radical break is that our notions and languages are embedded in the object oriented understanding of the world, which makes it very difficult to communicate a relationary view. The easiest way may be to use an empirical example to unfold Pirsig's assumption.

Take a chair, for instance: A chair as an object with quality properties is linked to the evaluators of the object and their value relations (Glover 2003, p. 50):

- 1) The chair can be the observer's favourite chair to sit in and read his newspaper. In this case the value relation is linked to the quality of comfort of the chair in relation to the habitus of the man, how he feels when he is sitting in it, etc..
- 2) The chair-observer relation can be based on sentimental value. The chair could have belonged to the man's mum and reminds him about the good and easy moments of his childhood. The relation is then linked to the qualities of the shared history of the man and the chair.
- 3) The chair-observer relation could also be linked to an antique evaluation, which means that the chair has got a generalised value to many observers, due to other value relations of the chair, e.g. the designer of the chair may be famous, or this particular chair could have belonged to a certain famous person, or it is a very rare chair.

In all three examples the value relation and objects cannot be separated from each other. In the chair-man relation both the chair and the man is a part of the relation. The value relation constitutes both the 'value for the man' and the 'quality of the chair'. The three examples reflect three different quality relations that can be independent of each other, or can be at stake in the same relation. It may also impose some conflicts in the relation, if the chair holds a high antique value the man may avoid using it as a comfort place for relaxing.

This also leads to another issue. The value relation can be a complex relation including many possible qualities, and there is no outside observer position from where this complex can be observed. For the further operationalization of this analytical framework we refer to *value* as the unity of the relation between observer and object (or more generally, the unity of any relation between objects) and *qualities* is referred to as analytically basic, one dimensional elements of a value relation.

Applied on a food network

Now we will try to apply this radical view on a food chain. From this point of view, the producer-consumer relation is viewed as a value relation including the mediating food items. All three elements are a unity of the quality dimensions connecting them (Figure 1). First of all, it is obvious that it is not possible to speak about a consumer if there is no producer and no food item, and vice

versa. Secondly, all three elements depend on each other to constitute the quality dimensions that connect them. As an example the food item is only organic when it is both recognised by the producer and the consumers. The producer could live up to the organic standards but that does not make the product organic if it is not recognised by the consumers. The producer could follow the rules but the consumers could have other expectations to what is organic, e.g. expect that the food item was tastier.

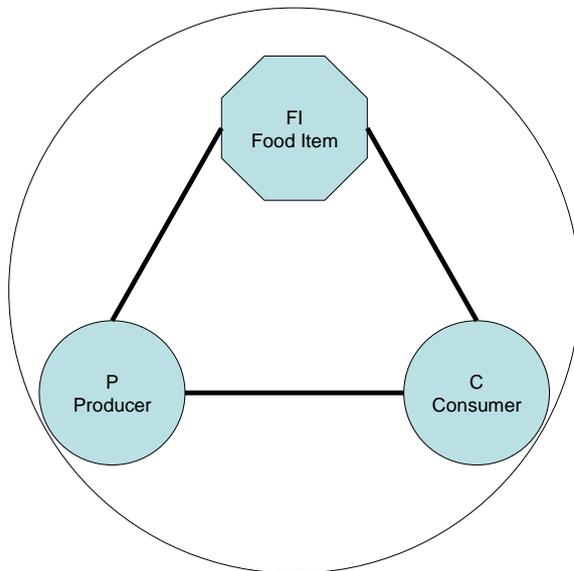


Figure 1: The producer-consumer-food item relation is a unitary value relation of the food chain

However, the situation where the mediating values are a direct relationship between producer and consumer in terms of direct marketing are the exception. The development has widely gone in the direction of differentiation, including more and more links between soil and table. We therefore need to generalise the analytical concept to encompass an arbitrary relation in the food chain (Figure 2), where what is explained above is applicable to every relation in the link or network.

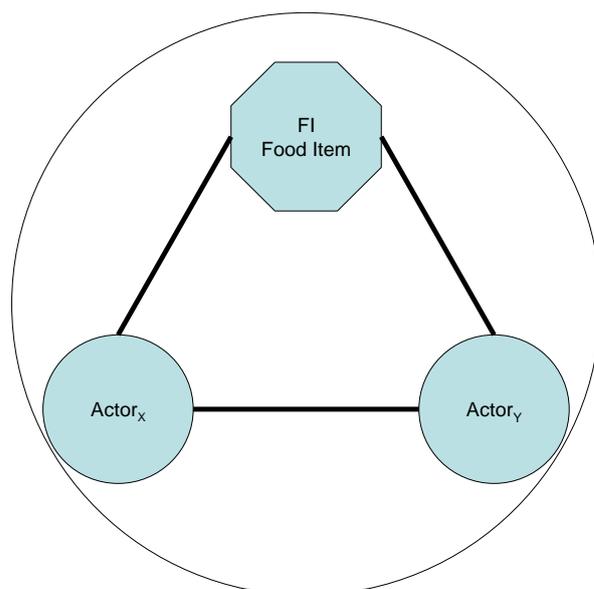


Figure 2: A generalised figure of the unitary value relation of the food network.

However, a food chain network not only consists of relations between market actors, but also of the internal relations of the actors. We can use a dairy to illustrate this. On the one side of this link we have the farmer-raw milk-dairy relation on the other side we have the dairy- products-retailer relations. Physically, there is a material flow through the chain, but the quality relation may change considerably. The internal relation can be seen as the actors (organizations) strategy to mediate between the two sides of the chain relation. Again, processing is a transformation that is also a value relation involving different quality dimensions. And it becomes an object of observation how the involved quality dimension change between these links, and to compare what this means to the construction of the food chain network

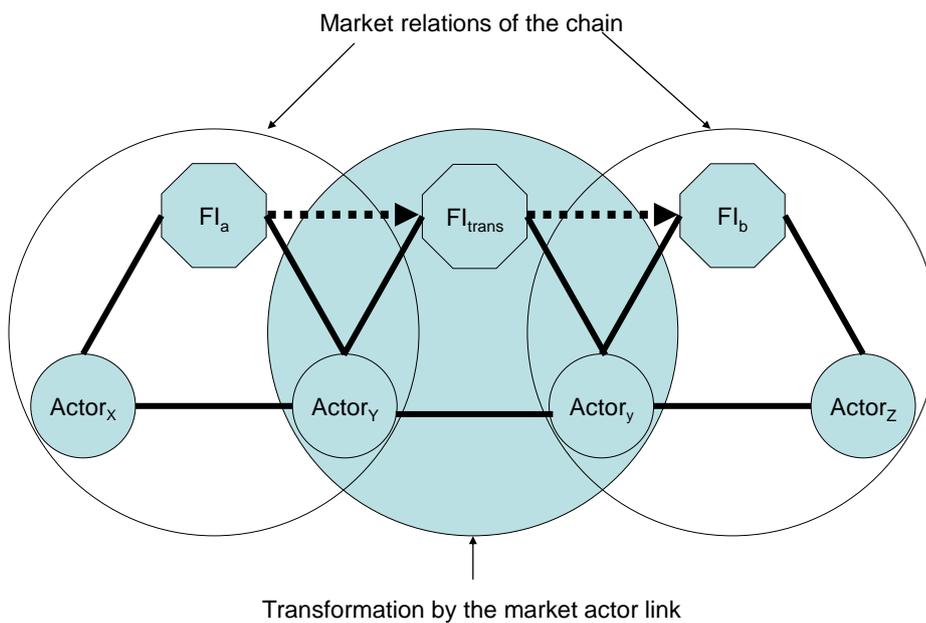


Figure 3: A food chain network not only consists of value relations between actors but also internal value relations of the actors, transforming and mediating between the two sides of the chain.

Figure 3 is meant to illustrate these two kinds of ongoing processes producing and reproducing the food chain network, mediating the food items through the food chain. A last methodological point to make, is that the food chain does not start with the producer selling and ends with the consumer buying the food; it starts in the field and ends in the stomach. And what there is in between these two positions, is what should be included in the analysis (Figure 4).

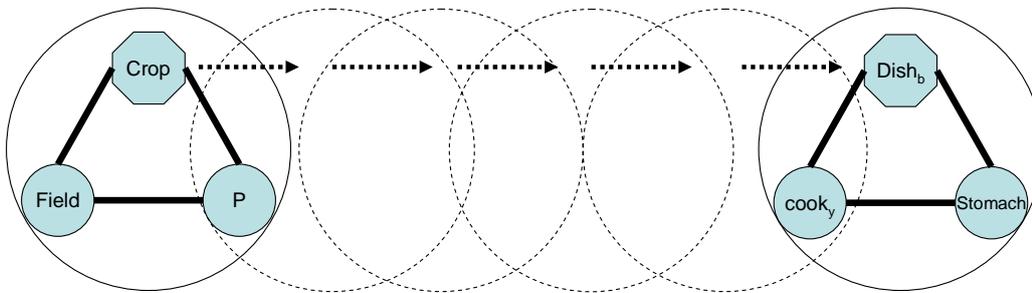


Figure 4: The value relation of food chain always starts in the relation between soil and stomach. Between these two positions, the food network relations are mediating and transforming the food items through the chain by carrying, adding or reducing the quality dimensions of the value relations.

A typology of different quality dimensions involved in food network relations

Before we go into the empirical analysis, we will present a first attempt towards a nomenclature of different quality dimensions involved in food networks. A typology is always a way to manage complexity from a certain perspective, and a such a typology needs to be developed and improved empirically. The following typology of quality dimensions is meant as a first attempt to do so.

Based on a National stakeholder Forum (NSF) seminar held in the Danish part of the COFAMI project, we have developed the following typology of quality dimensions that are involved in the mediation of relations between the actors of the food network, as a starting point for analyses, but of course also open to improvement and reconstruction.

At the Danish NSF we distinguished between five different types of qualities, which are mediated in different ways.

- 1) **Qualities of safety**, the main issue of the industrialization and globalization regime, and has in the Danish context more or less overruled all other quality aspects totally, especially due to our interest in sensitive export markets.
- 2) **Qualities of health**. The dominating discourse of quality, mediated by the table of contents, and mediated by the whole industry of functional food. However there is also a whole bunch of alternative quality of health movements at stake.

- 3) **Ethical qualities** about fair trade, environment, animal welfare, etc., mediated by labels, certification, rules and control. Organic farming is mainly embedded in this quality dimension.
- 4) **Aesthetical qualities** that are linked to the consumption of the food, like taste, flavor, look, rituals. These qualities are based on differentiation and not standardization, and they involve a human factor. Mediated by brand and culture. Depends on persons that can bring the “smile” through the whole chain.
- 5) **Qualities of rootedness.** Reconnection to soil and nature, that the food is produced somewhere by someone, cultural and artisanal.

Analyses of different cases

In the following we will use three Danish cases to illustrate how the approach can be applied to explore food networks, by looking on how the different quality dimensions are involved in food network relations. These three examples are the organic dairy networks involving Arla Foods, the organic dairy food network involving Thise organic dairy company, and finally Fejø cider.

Arla Foods

Field cow farmer quality relation: Arla Food is processing about 95% of the Danish raw milk and a large number of organic farmers deliver milk to Arla Foods. An earlier questionnaire reveals that there are many quality dimension at stake (Michelsen 1996; Michelsen & Rasmussen 2003), varying from pioneer organic farmers strongly involved in developing and implementing the ideological ideas of organic farming to farmers that converted to organic simply as an opportunity to increase their income (Noe 2006). Acknowledging this great heterogeneity, the only quality relation the organic farmers have in common is the relation linked to organic legislation: like the prohibition on using chemicals and fertilizers, the restriction on using medicine, the rules to secure animal welfare, and the demand that the cows shall be at pasture 200 days per year.

Farm-dairy relation: The prize of the raw milk is defined by the technical qualities of the milk, fat, protein, cells, spores, and some other measures, and then a premium prize for the certified organic milk. The core value relation between farmers and cooperatives is that the dairy has to obtain the highest possible return to the farmers, and that all farmers should be treated equally. The settlement to the farmers must be based on technical ‘objective’ values (Noe 2007 Danish National state of the art report on collective marketing strategies. EU-COFAMI project).

Arla Foods internal relations: In the dairy the milk is processed and transformed to supply the market demands (As a mixed dairy they cannot connect to any ideological value). Depending on the market demand and the infrastructure, some of the surplus of organic milk is merged with the conventional milk already at the farm gate (Noe 2007). Internally in Arla Foods organic milk is a raw material like conventional, and, except that fewer additives are allowed in organic processing, the organic processing line and technology is the same as the conventional, and most products are produced in parallel versions of organic and conventional.

Arla-retailer-consumer relation: Because Arla is a big company, the marketing network chains of Arla enrolls almost all supermarkets and shops selling dairy products, and in most cases organic and conventional products are placed together in the same cooling counter. All the organic products of

Arla are marketed in their own brand, Harmonie. As it also has been explained on the milk carton of Harmonie, the primary quality differentiation between the conventional and the organic milk is the ethical issues linked to the rules. If you buy organic, you do something extra for the welfare of the cows and something good for the nature and environment. To cope with the relation to the majority of the farmers of the cooperative, ARLA food cannot sell the products on a critique of the conventional way of farming, but has chosen to cope with it as a niche product relation demanded by the consumers. They cannot market it on aesthetical and health quality differentiation because the aesthetical quality differentiation in Arla is linked to processing technology and know-how and not to the differentiation of raw milk. And they cannot market organic milk on the health and safety quality dimensions because there is no wish or evidence to differentiate on these products. This is a very quick analysis of the Arla dairy food chain, and it has to be emphasised that the quality dimension of rootedness is becoming increasingly involved in the marketing strategy, like regional milk, and there are also new ideas on differentiation on input, like Jersey milk.

To summarise the Arla case, three factors seem important to describe the quality connections and thereby the values in this food network. The scale combined with the ethical requirement of treating all farmers equally (including organic and conventional farmers), the aesthetical quality differentiation is linked to processing technology and know-how and less to the raw milk, and, finally, organic products cannot be praised as a critique of conventional food chain values.

Thise

This dairy is an organic dairy cooperative, with 75 farmers. It is at the moment the second largest dairy in Denmark. There are of course many similarities in the value relations of the two organic food networks and in this analysis we will only focus on some of the major differences in the quality dimensions involved.

Field-cow-farmer relations: The organic farmers involved with Thise are more homogenously dedicated organic farmers. Especially in the first years of its existence, in the early 1990's, the pay back to the farmers were small, which means that only the more dedicated organic farmers were attracted. This means that the development of organic farming values and praxis is not only an individual matter but also concerns the relations between the farmers. An example on how this has influenced the quality relations of the farms is the farmer field schools organised around animal health and phasing out of antibiotics (Vaarst 200?).

Dairy-rawmilk-farmer relations: Due to the size and construction of the cooperative the farmers feel that they have a strong influence on how the raw milk is processed and marketed. Opposite the Arla network, the aesthetical quality dimension plays a role in all relations in the chain. This can for instance be observed in the ideological statements of the dairy: That the quality of the milk cannot become better than the raw materials that it is made of. And that the challenge of the processing is to take care of and support this quality.

Thise internal: An example on how this farmer dairy relation affect the internal relations is that the dairy very early on started to make yoghurt products of jersey milk because it is more condensed and therefore naturally gives a better consistence of the curdled milk products.

Thise-Irma: The dairy retailing relation has also formed differently. While Arla has marketed its own brand to all retailers (necessary due to its size), the single marketing relation between Thise

and Irma has been the main corner stone in marketing and development of These based on aesthetical product differentiation. These products have been marked in a merged brand applying both the logo of Irma and of These. A part of this value relation is that These continually develops new products.

In the These case the aesthetical quality dimension is present in all the relations of the chain. And it is prior to the ethical as Irma formulates it: that it is organic is a matter-of-course, but the important thing is that the products provide us with aesthetical qualities and a brand that you cannot buy on every corner.

Fejø cider

Fejø cider is a cider developed and produced by an entrepreneur based on the isle of Fejø. The apples are bought from a handful of small organic apple producers on Fejø.

Soil apple farmer –cider- relations: The cider production started as one activity among a whole bunch of others (plural-activity) to make an income on the small island. The climate is mild and good for fruit growing. The quality relation of the cider of the entrepreneur is not only to directly generate and income, but also to provide a platform for marketing other activities, like bed and breakfast tourism, and as an activity to brand Fejø as a whole.

Farmer-cider-marketing-consumer relation: The qualities of the cider have been recognised and the quantity is limited due to the limiting production of organic apples on the small island. The identification of being grown and produced on Fejø is an important quality dimension in the marketing. Marketing involves for instance a small gourmet restaurant on the island, who has specialised in cooking with local Fejø products, and the chefs of the restaurants have developed a Sorbet ice-cream that has won an awards for special local products. Other restaurants and chefs play an important role in marketing too. Also Irma is involved in marketing of the Fejø cider. To Irma the local identity of the product is a differentiation of quality that is an important factor in their consumer relations. Tourism is an important element of the Fejø cider food chain. People can visit the places where the apples are grown, and where the cider is made. And they are served Fejø cider on the local restaurant.

Discussion and conclusions

The three cases represent a hierarchy of quality dimensions in the relationships. In the Arla-food network the primary differentiating dimension of quality was the ethical, concerning animal welfare and environmental issues linked to the organic legislation. In These the primary differentiating quality dimension was the aesthetical, while the ethical was inevitable. In the These food network this is possible because it is a possible distinctive quality relation between all actors in the chain. Fejø cider employs both the ethical and the aesthetical dimensions; however the distinctive quality dimension is here the rootedness of place and the pome fruit tradition of the island. This quality dimension is a possible quality relation, because there is someone to tell the story of the rootedness in all the links of the food network, and it is a story that people drinking Fejø cider can experience by them self if they want.

The main aim of presenting these cases was to give a kind of pilot demonstration of how the framework can be applied in praxis. Of course all three cases deserve a much deeper analysis and

description than have been possible within the scope of this paper. Even though the analytical framework is new and not yet matured, the pilot analyses have proven workable to explore the coherence between different quality dimensions employed, and how the different food networks operate and link together.

From an organic farming perspective this means that the organic farmers should not only focus on the quality of the products and their way of farming, but also on how these qualities can be processed, carried and communicated throughout the whole food chain to the consumers.

While the examples above are only Danish, it could be interesting to explore whether the suggested quality dimensions are useful to explain the development of the organic food markets in other European countries, and to compare how these organic food networks are related to existing food networks and quality dimensions.

The methodological framework needs to be developed empirically by doing and reflecting and we will be grateful to any who will contribute to this effort. Theoretically the framework, which is based on Pirsig and Peircean semiotics, is in many ways closely related to Actor Network Theory, which has been employed in various studies of food networks. We hope that Pirsig's relationary notions of value and quality can help to radicalise ANT, to understand the unity between "relation and actants", and to translate this into an analytical strategy

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