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**FROM LOCAL FOOD MOVEMENT ACTIONS TO PUBLIC POLICIES. A NEW APPROACH TO
RURAL FOOD CONSUMPTION IN THE ERA OF DIGITAL REVOLUTION**

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Abstract: This article is going to analyse the phenomenon of local food movement and the differences with the value chain model, which is the prevailing one and whose philosophy inspires public policies. Local food movement has had a big opportunity through the Net, which allows it to be spread from the local spot to the rest of the world. Through 'L'Arbella' analysis, a very small project developed in the Catalan Pyrenees, which has been studied for this article, we are able to understand how the new model works and which the ICT function is. The example permits to show one of the tools this movement has developed (consumption group) to create a new food sense, far from chain value model. This is grassroots demonstration allowing to develop public policies focused on the current reaching consumer habits and a new group of stakeholders.

Key words: rural development, commercialization, consumption, ICT, marketplace.

FROM LOCAL FOOD MOVEMENT ACTIONS TO PUBLIC POLICIES. A NEW APPROACH IN THE ERA OF DIGITAL REVOLUTION.¹

INTRODUCTION

“Two economies and economic structures seemed trying to consume one another, one based in the global economies of scale of the material world, the other using possibilities of decentralization and renewed localism available using the Internet, and the information economy in general. Just as highly mediated grassroots organizations might increasingly be able to draw on global resources and key leverage points to restrain global corporations, corporations which still have to fit into the context of local decisions, so global corporations will be able to draw on their own financial and informational background to influence local politics.” (Uncapher, 2011).

According to a Market Research done it by the Observatory of Food Consumption and Distribution (MARM, 2010), Spanish people buy following three criteria: quality, price and proximity, on that order. They usually go to a big supermarket so as to get their provisions, spending three hours every week. For that reason, the value chain model has had a big importance in the development of business management and its influence has defined the commercial food enterprises (Toribio et al., 2012). In that sense, the majority of agro-rural public policies have supported that model of food consumption. The possibility to control the quality and regulate prices has been the main reason to implant this economical model. Although final consumers have had their relevance, their role has been passive.

Despite that, there is another economic structure: local food movement. This model has reached another approach to food consumption, with some successful examples, based on engagement and networks. This model believes the main current system of food consumption is acting against the benefits of people. Their structures are not vertical and lineal like the way big supermarket chains work. They work as a net of knowledge. In addition, their goal is not economical benefit; it is improving the quality of population feeding and the local development.

KNOWLEDGE AND SUSTAINABILITY BECOME RELEVANT: VALUE CHAIN VERSUS LOCAL FOOD MOVEMENT

The majority of public policies have been developed in Spain and, on the whole in the rest of Europe, in the agro-food sector focusing on the value chain. This theory model started by Michael Porter in ‘Competitive Advantage: Creating and Sustaining Superior Performance’ (1985) describes activities developed in a sector or a business so as to generate value to the final customer. Juan José Toribio in the inquiry ‘La cadena agroalimentaria en España’² (2012) analyses the distributed organization of agro-food products as a piece of value chain under Porter’s theory.

The schedule below (Figure 1) defends the necessity to collaborate among the different participants so that the final consumer receives the product in the best conditions. Each participant gives his/her own value in the activities having a “competitive advantage”. According to Porter’s model, through specialization, costs are minimized and customer value is maximized. The process generates a chain able to integrate information systems,

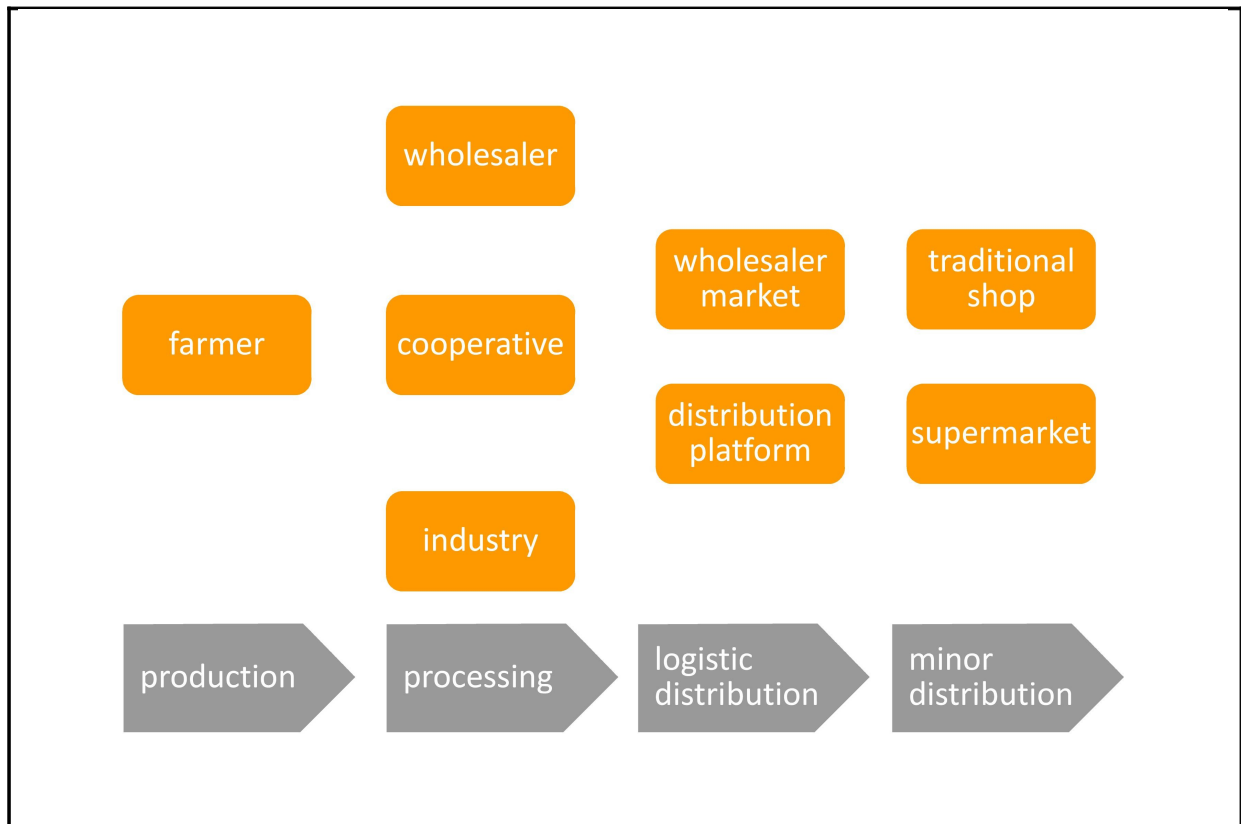
¹ This communication belongs to a broader research called ‘ICT in agro-rural food commercialization in Catalan area’ hosted in i2TIC (IN3 · UOC · Research Group).

² ‘The agro-food chain in Spain’

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production and distribution by all business participants. The lack of that collaborative structure in the agro-food value chain, as reported by Toribio, would cause more costs for customers and would reduce quality.

Figure 1: Value chain scheme and economical stakeholders



Source: Represented by Juan José Toribio based on Competence Defend Spain Association (2009 & 2011) and Rural Spain Government (2009)³.

To sum up, the model referred by public policies is focused on permitting and strengthening this value chain, which is the base of the agro-food market.

In the opposite point of view, currently, the local food movement is spreading with a great expansion in North European countries and especially in the United Kingdom. This tendency is included in the global task done by local network groups, active in thousands of cities around the world, to transform the consumption model. A relevant reference to understand its nature is found in Rob Hopkins, who published an important book for this subject: *Local Food. How to make it happen in your community*, together with Tamzin Pinkerton. That book has been a key to take the influence of the local food movement regarding consumption in different communities around the world into consideration. The movement, based on permaculture, tries to give a positive and encouraging answer to communities in front of peak oil, climate destruction and economic instability.

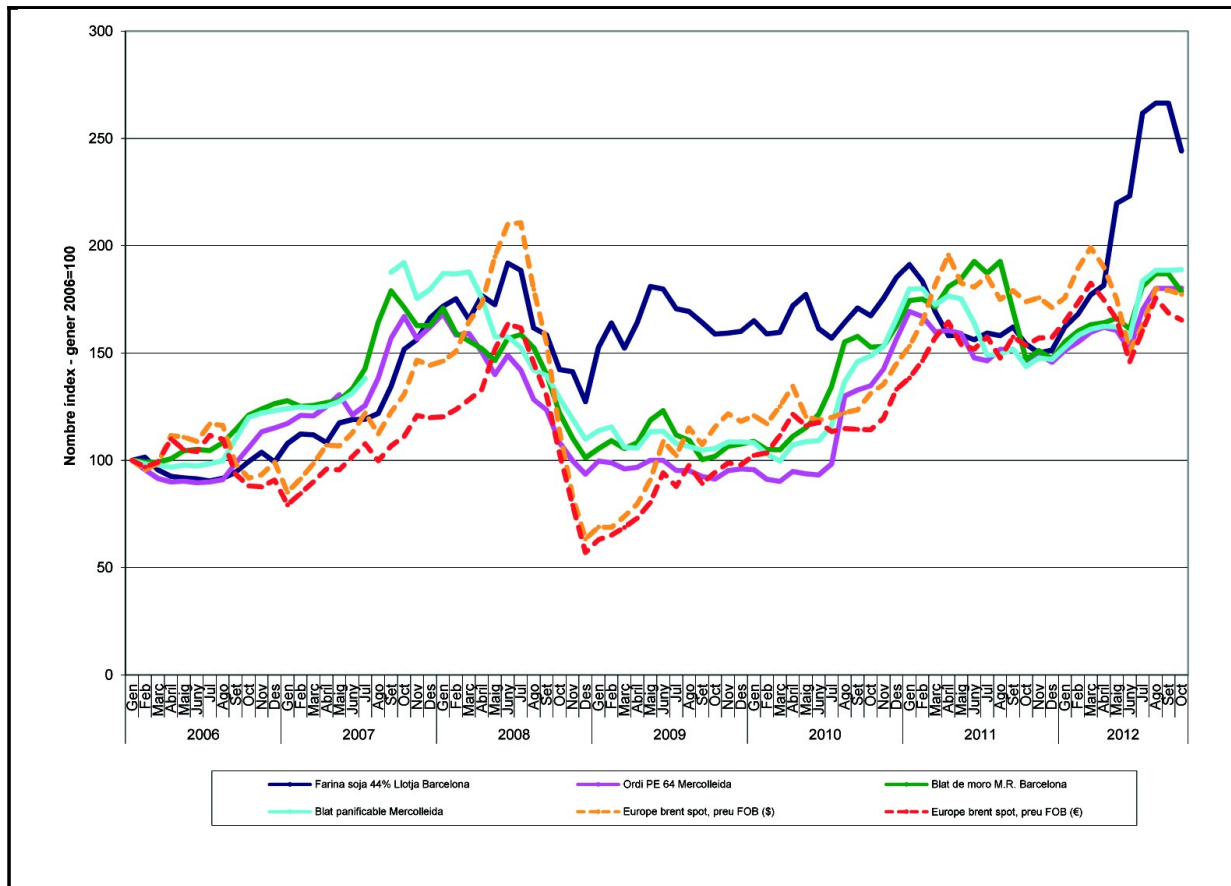
As I advanced at the beginning, public policies, until now, following the value chain logic, have focused on generating opportunities and supporting this model of marketing food products. According to Michael Porter, the system improves the quality and regulates the cost of market products. In spite of these advantages, the local transition movement claims against the current consumption pattern because it causes ignorance around product and it is not aware enough about environmental sustainability. On the one hand, it does not allow, in the majority of cases, a direct identification between producer and consumer. That is the

³ *Defensa de la Competencia CNC (2009,2011) y el MARM (2009).*

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result of chain value, which separates consumer from the product origin: its producer. On the other hand, the environmental impact of the agro-rural food commercialization, far from its origin, caused by long transport (Figure 2) is not evaluated enough in the whole process of value chain. In short, the objective of Porter's value chain model is grown through competition.

Figure 2: Connection between the fuel oil prices evolution and agro-rural products.



Source: by DAAM (Rural Catalan Government) (<http://alturl.com/nhp4a>). Data is provided by la Llotja Barcelona, Mercolleida and US Energy Information Administration. It shows the connection between the fuel oil prices evolution and agro-rural products. It works in the same way on the stock products graphic.

According to the survey published by 'Los amigos de la tierra', with Vigo and Sevilla University researchers' collaboration, from 1995 to 2005 the food products imported in Spain increased 53%. Currently, Spain imports 29,000 million Kilograms of food every year. All that food movement is creating 4.7 million tones of CO², which is helping to speed climate change. To sum up, every product has travelled 5,013 km on average from its origin until it arrives in Spain.

Currently, the most important part of food system, is focused on big distribution, which is based on value chain and consumption, so as to get the most possible benefit. That trend is fighting against traditional shops. Big supermarket nets have the control of the majority of food launched in the market. In the case of Spain, Carrefour controls commercialization of one fourth of the products sold. In addition, the modern agrarian policies are defending this system, carrying on with the agro-food exploitations restructuration and the expansion of industrialization of the agro-rural food sector (Mauleón, 2009). It is really important to analyse population feeding because it shows social phenomena as modernity and individualism and it stimulates and replicates them. The way we consume food influences in wealth concentration, local development, way of life...

The Local food movement has the objective to decrease the current consumption model and to reach it, cooperation among stakeholders is promoted. Positive spirit to spread their

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philosophy and the capacity of engagement are their strengths. The principles on their acts and enthusiasm (as a tool for social cohesion) must demand public policies support.

By focusing the attention on consumers, as an organizational element, with the use of ICT as a facilitator of network pattern, public policies helping the principles of the local food movement are likely to be stimulated.

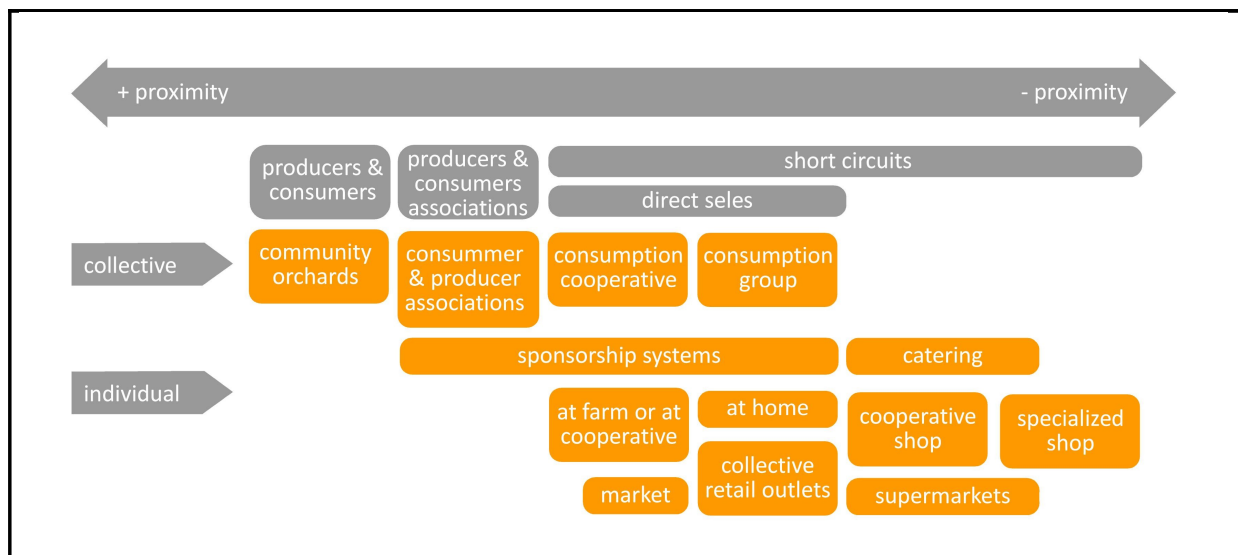
AGRO-RURAL MODELS TO APPROACH TO KNOWLEDGE BETWEEN PRODUCER AND CONSUMER

Nowadays, effervescence of short circuits of commercialization, which in fact has never disappeared, is growing in a lot of countries. New models of commercialization have been arising during the last years allowing new approaches between production and consumption, as well as, urban and rural world. (Binimelis & Descombes, 2010)

Even though, the definition for short circuits of commercialization is focused on the number of intermediaries between consumer and producer (European Leader Observatory), the local food movement bets for the agroecological approach involving local nets.

Binimelis & Descombes (2010) represent the short circuits commercialization focusing on the proximity between producer and consumer, understood in terms of relocation and resocialization strategy.

Figure 3 : Short circuit of commercialization food schedule



Source: Elaborated by Binimelis & Descombes (2010) from Maréchal (2008); Valls (2006) and Venn et al. (2006).

Specialized shops. Products are from the shop owners or bought directly to local producers. There are two relevant factors related to this way: minimum population density is required and trade margins must be higher because of the investment needed.

Consumer cooperatives. Consumers are able to buy collectively through their own collaboration. The objective is to have a direct relationship with farmers, livestock and product processors in order to get confidence among them. In addition, it is possible to get some good deals thanks to the demand volume. The debate around food is common in this model of organization. A lot of times, there is a place where to take the purchases.

Consumers' cooperatives with shop. Sometimes the last model described has a shop where other people out of the organization, who are interested, can buy. On the other hand, the process has been inverted: shops create their own consumer groups.

Producers' and consumers' cooperatives. Both roles are in the same structure.

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Consumers and producers sign a contract in agreement to fix a quantity of harvest. In that model, both sides share benefits and risks of the harvest. What is more, the products offered by producers must be ecological and from the land of the farmer.

Producers' cooperatives / Collective place sellers. A group of producers or processors administer a shop with land products. This methodology is sometimes combined with other options like selling directly in market or at home. Other variant of this model is when a group of producers or processors, without any physical selling space, meet to exchange (or buy) products among them.

Community orchards. Those spaces are collectively managed by a group of people who work directly the land. In that case, producers and consumers are the same. In the process, they strengthen their ties. In spite of not being a proper commercialization spot, they work as a net by sharing their knowledge in order to change their food habits.

Catering. The collective catering allows preparing meals for people who live or work in a community. In that case, catering services search for local food producers.

Sponsorship systems. It happens when a person or group of people sponsorship an animal. They pay a fix quantity of money in advance to receive a product in the period of time agreed. The sponsorship could receive information about the animal and visit it at the farm.

Supermarkets. Big chains of food companies sell in a network of cities. Some of the products are from local producers but in a small quantity. Indeed, the connection between consumer and producer is negligible.

Direct seller at home or consumption groups. A farmer sends an open or close basket to the consumer's home. In case of a close basket, price is fixed and it is received weekly or fortnightly. A variant of this methodology is when a consumption group agrees to receive the products in the same place. The collecting space is sometimes related to work or daily activities.

Direct farm sales. Products are sold directly in farm. Farmer is able to have a spot to sell without a big investment and the consumer is able to know the place where the product is managed.

Direct market sales. The farmer sells directly in a marketplace. It is sometimes either a regular place located in a village or city, or it is a flea market (once or twice a week). In some occasions, producers sell in a specialized market celebrated in a fair taking advantage of traditional events (medieval, for instance).

To sum up, in the majority of cases, producers and consumers are organized in communities to get more advantages. Collaboration is a good form to reach the objective to connect consumers and producers. The added value is the possibility to know more things about food consumption and how to share the knowledge among the people (consumers and producers) involved in the process. That proposal goes further the value chain theory of getting better economic advantages and improving product quality. Indeed, networks and knowledge, both transformed in confidence, are the key points of organization around agro-rural food consumption in the local food movement.

LONG TAIL REVIEW: MARKETING APPROACH VERSUS COMMUNITY POINT OF VIEW

Food commercialization has a big importance for economy. According to Mauleón (2009), 25% of TV advertisements are focused on food. Even though food is a priority for marketing, the 'consumer deskilling' is growing (Jaffe & Gertler, 2006). A lot of consumers have missed their knowledge and required abilities to evaluate the products they consume.

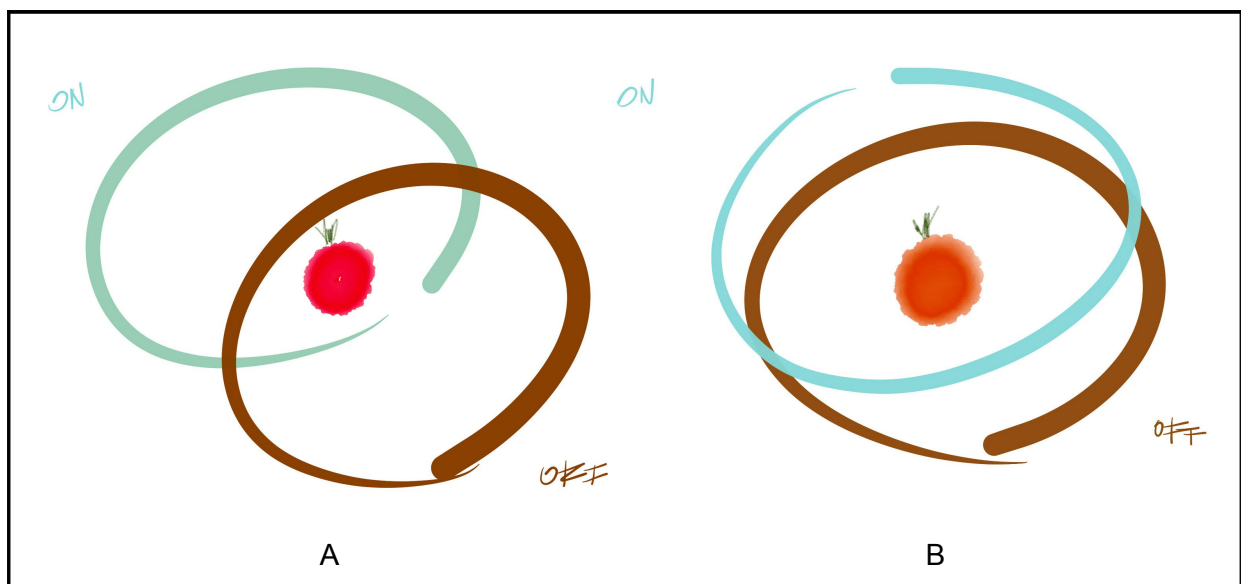
Internet has been proposed as a tool to connect without any intermediaries. But as we have seen before, the value chain has created an opaque gap between producer and consumer.

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Although the consumer is able to buy agro-rural food products in a supermarket chain in 'one click', he/she does not know a lot of things about them.

The objective of this chapter is reviewing ICT possibilities for agro-food consumption through the vision of collaboration in short circuit commercialization. In the majority of cases, Chris Anderson's theory (Long Tail) interpretation has developed an Internet vision as a space where costumers anywhere in the world are able to buy whatever product they want. According to that, the idea of selling to any place around the world is possible and that strategy strengthens another consumer group around the product (Figure 4, A). In spite of that marketing vision, the investigations give ITC other opportunities better connected with the sense of local food movement. In that vision, the priority is not to keep the possibility to be able to sell anywhere around the world through the Net, but to engage citizens around the product they consume. The result is a community, which has a big connection with local localization and using ICT to organize and collaborate among them (Figure 4, B).

Figure 4: Online and Offline community generated around the product



Source: By Ricard Espelt.

Figure A shows the marketing vision of ICT applied in the commercialization of food products. According to that, it is possible to get an online community of consumptions beyond the offline community. Figure B defines the possibilities to interact with online and offline community around the product. In that case, the community is the same but the possibilities are relevant.

Through the following point, I am going to analyse the key points allowing to think that ICT is likely to improve the community around the agro-rural consumption based on knowledge and local networks.

Virtual community. As we have seen, the approach of local food movement is focused on growing a community around the same objectives. Through this reasoning, the Net vision as a space to strengthen a community and to spread knowledge is more relevant. Social aggregation with people enough is defined as a virtual community (Rheingold, 1993).

Cooperation and identity. Confident environment and feeling a part of a collective identity is required to generate a cooperation framework. Cooperation is needed to improve innovation around commercialization. It is necessary to create an innovation climate in the productive system by organizations, associations and stakeholders (Caravaca, González y Silva, 2003).

Strengthening local action. The possibilities of a global tool in the local action and the necessity to connect reality and virtuality are described by Woolgar in 'Five rules of virtuality' (2002). Social and geographical ties are strengthening through the virtual community thanks

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to the capacity of social tools to ramify their nodes (Bateman & Lyon, 2002). Logically, the faculty to participate without traditional geographical and temporary gaps increases the value of the technology tools. (Wellman, 2003).

Global technology, local application. Even though we are referring to some global tools, social relations and usability among their members through ICT are raised the moment they are applied. Instead of thinking technology significance exists before its uses, each application has its own reaction. (Hine, 2000).

Targeting local interests. As the RuralNet project has evidenced in the state of Montana (USA), the option to focus attention on groups of interest (e.g. rural women who wanted to go on with their studies so as to increase their economical possibilities) reached a great success. In addition, the project has improved socialization among its members (Uncapher, 2003).

New fluctuating networks. The power of Internet allows to create fluent and direct new ways to socialize through virtual communities (Feenberg & Bakardjieva, 2004). Common objectives of interaction among members of a virtual community with defined roles (Preece, 2000) permit to give a useful structure for local agro-rural food commercialization (Espelt, 2011).

Enthusiasm, intuition and searching benefits are three characteristics of communities, which have been grown online (Feenberg & Bakardjieva, 2004). This reflection approaches to the reason why the transition towns movement has spread through the Net.

Decreasing middleman role. ICT incorporation in the agro-rural food commercialization decreases the importance of physical gaps. That allows direct connection between producers and final consumers, reducing the role of the intermediary (Bernal&Mozas, 2001; Espelt, 2011). What is more, small dimension and producers' atomization give the possibility to both collaborate and sell in the process to negotiate with consumers and suppliers (Mozas et al., 2001).

An opportunity for individual producers, too. Social networks, which have opened a new spectrum of agro-rural food communication and commercialization, have also given opportunities to the small producers. Indeed, these have reacted more quickly than traditional organizations (Espelt, 2011).

According to these points, it is possible to think that ICT are able to help in a new approach to the agro-rural consumption focusing on the engagement of the community and the connection among producers and consumers. Technology must be an opportunity to overcome old gaps. In addition, tools should be improved to attract consumers and help them to collaborate to change the way they consume.

ARBELLA: A NICE NETWORK TO IMPROVE FOOD KNOWLEDGE

To understand how a group of consumers works and which benefits that organization model has, the following chapter is focused on the *Arbella* cooperative⁴. This is one of the about one hundred consumption cooperatives in Catalonia. Its location, in the middle of the Pyrenees, where it suffers geographical tyrannies has drawn my attention. L'Arbella cooperative (Figure 5) provide to their members 285 products (251 of them are agro-food). The average distance between origin and final consumption is much shorter (110Km) than the one (5,013 km) value chain promotes. The cooperative provides a big type of products and families are able to follow a properly nutrition. It is important to mention that some of products (only 14) are from abroad (coffee, for example). In that case, an NGO (Comerç Just) provides those products so as to create a just transition between providers and consumers. In my point of view, its example shows how important the action of local stakeholders really is in the way to approach to local food consumption. What is more, ICT is

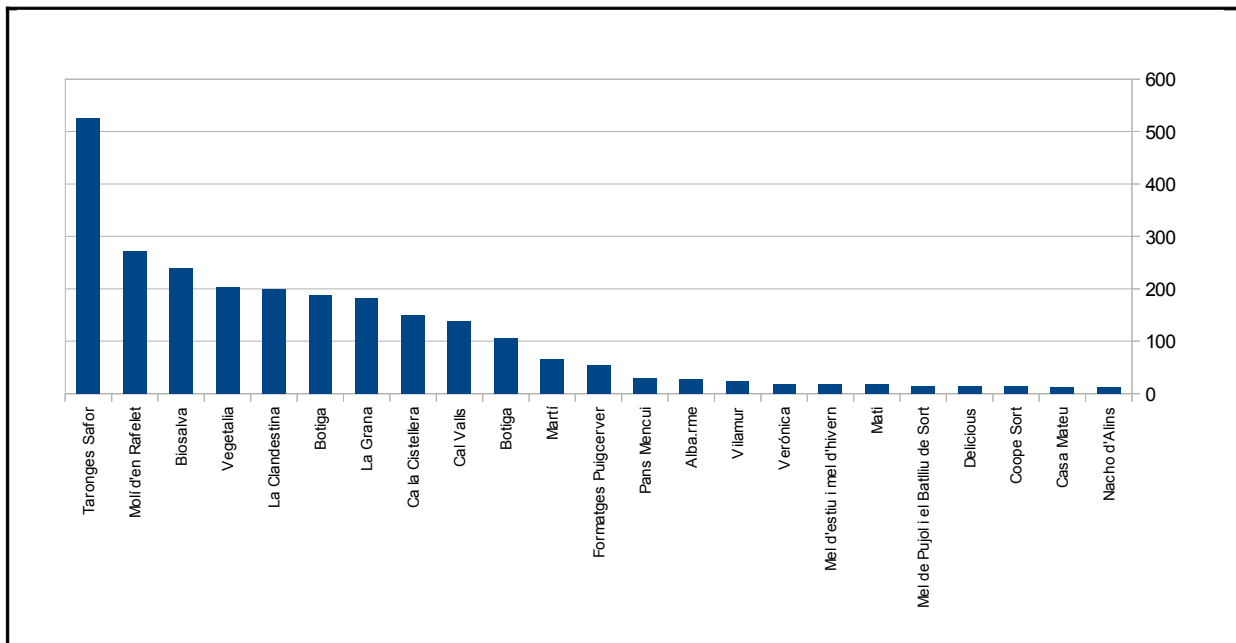
⁴ The key points of this chapter follow the investigation done in January 2013 in contact with some cooperative members.

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able to act as a sheet helping them to improve their work methodology so as to reach their goals.

Breaking knowledge gaps. *Arbella* is a consumption cooperative with 30 families from Pallars Sobirà located in Llavorsí. Their main objective is related to the goal of this article: promoting local consumption by establishing a direct connection between consumers and producers. Some of the members are also producers. Their experience allows reviewing the dimension of local producers' action with the rest of the territory connecting their products with local consumers. That close relationship in a short consumption circuit (directly, indeed) breaks the gaps to knowledge. Consumers have direct information about product through the producer or processor who has made it.

Figure 5: Distance (kilometres) between origin and final consumption in L'Arbella.



Source: Ricard Espelt with L'Arbella data.

Making easy personal demands. Cooperative was created five years ago. At the beginning, they worked without ICT tools and their functioning methodology was a little bit different. The group of consumers received a closed basket of agro-rural food products every week. According to Michael Loughlin, one of the most active members of the cooperative, this way to work represented a big difficulty because the majority of basket reception did not fit members demand. A lot of times an important part of food ended up in a bin or it was unsuitable to be eaten. Nowadays, they choose their own petitions according to their needs. On the cooperative website, members are able to check their food petitions (like a marketplace). Indeed, all baskets are booked on the cooperative website.

Collaborative backstage. The community is organised in family units⁵. Each member has his/her rights but also his/her responsibilities. The backstage is very important. We can distinguish different roles for members: consumers who are also producers, consumers who are responsible to contact producers and the rest of members. Despite these different roles, each family unit must attend 'the distribution day' (about every two months under a rotary shift schedule).

Online and offline activity. When the members have finished food petitions, a process starts, which involves different responsible members⁶, so as to prepare basket petitions.

⁵ Arbella family units <http://arbella.cat/informacio/uf>

⁶ Members who are producers must attend petitions directly. Members who have direct contact with producers or processors must order customer requests.

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Therefore, producers check their demands on the website in order to prepare them. 'The distribution day' is celebrated every two weeks starting from 3.30 pm to 9.00 pm. In this period of time, the members go to the cooperation place (a rented establishment) to take their order. They are organised in rotating shifts, which are managed on a Teambox group. In addition, that online tool is used to inform about incidents during the distribution.

Social framework. This methodology among cooperative members reinforces their relationships. The cooperative establishment is not only a place where to collect food, but also a spot to meet all together and share their knowledge and strengthen their relations. In a corner of the room, for instance, there is a small place where children are able to play. Kids spend their time playing while they also start to engage in this way of food consumption.

Spreading local network food consumption. Clara Ferrando, one cooperative member, is also a cheese producer. She receives milk from la Garrotxa (near region) and makes her own products (sheep cheese – 3 varieties and sheep yoghurt). As a member of the Arbella cooperative, Clara supplies some of the cooperative requests. In addition, Casa Mateu Formatgeria (Clara's brand), located in Surp, sells its products to local restaurants. What is more, she has some small distributors in some big cities (Barcelona or Girona, to name but two). Consumers, who taste her products, are able to follow her professional activities or contact her directly on her website.

CONCLUSIONS AND DISCUSSION

Small network groups. Currently, the value chain pattern has a big importance in the food supply. Some small groups are fighting to spread a new approach focusing on proximity and sustainability. Even though, their influence is not relevant in the whole data of food supply, they work with constant perseverance. The Net has given opportunities to know each other and spread their influence. ICT are, in that sense, an enormous tool so as to share their knowledge and approach to local food consumption.

Global tool, local application. It seems the use of ICT is efficient for local food supply. In spite of that, it is not clear these models could work in a big chain. However, probably, small nets interacting among them should be the most useful approach to population concentration in the cities.

Consumer power. Consumers have increased the possibilities to organize through the Net tools. That organization allows them to change their roles: consumers are more active and involved in the process of consumption. They want to know more about the origin of food products. What is more, ICT helps them to make the process of buying easier (web marketplace has a big importance).

Feeling engagement. It is very significant the way people, who are involved in these short small circuits, connect their feelings as a part of something that must change. The spirit of life is taken into consideration on the whole vision. Many members change their approach to consumption as a way to understand life and the relation with the environment. The website is an amazing tool to share (global) their experiences and knowledge beyond local action.

Distribution. A lot of times, this is the most important problem for food activities development. Specially, when the region trying to apply a new model is located in an uneasy geographical point (e.g. L'Arbella). In that sense, ICT is an opportunity to organize transport among network nodes of local food supply. Hermeneus, for instance, helps to take advantage about local distributors (they can offer their services themselves and producers and/or consumers can afford them) through that website. If travel between origin and destination is not so long, ICT are able to improve connections and relations among local stakeholders' process. That opportunity is well connected with the goal of local food movement: decreasing transport and benefiting relocalization so as to be more sustainable and reinforce resilience capacity to benefit local development.

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To summarize, some consumers have started another approach to food consumption. Their collective experiences are generally focused on small and middle groups of consumers. From another point of view, willingness to change the vision of commercialization (associated to buy) involving more and more the consumer on the whole process of consumption is also shared. According to that, consumer is not only worried about getting food in optimal price and quality, he/she is also concerned about where its origin is, which its producers are, how products are elaborated and what benefits local territory has in that process. For all these reasons consumers sometimes organize themselves to be more involved in the whole vision of food consumption. ICT helps them so as to know more about products, producers and to organize better and to approach origin and final consumption connection gaps.

That food consumption outlook is radically different from the value chain model it defends. In the local food movement the role of consumers is active and they represent an important part of the process. Indeed, they act as a new type of stakeholders. Therefore, public policies should answer their compromise with local development and environmental sustainability.

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