Alternative food networks as “market agencements ”: Exploring their multiple hybridities

Ronan Le Velly, Ivan Dufeu

Alternative food networks as "market agencements": exploring their multiple hybridities

Version 3

December, 2015

10 450 words

Ronan Le Velly

Montpellier SupAgro, UMR Innovation, 2 place Viala, F-34060 Montpellier, France,
levelly@supagro.fr

Ivan Dufeu

Oniris, LEMNA-Largecia, rue de la Géraudière, BP 82225, F-44322 Nantes cedex 3, France,
ivan.dufeu@oniris-nantes.fr

Alternative food networks as "market agencements": exploring their multiple hybridities

Abstract

The aim of this article is to show Actor-Network Theory's (ANT) potential for accounting for the alternative-conventional hybridity of alternative food networks. A review of the literature shows that this has not yet been done. Consequently, this article proposes to fill this gap with findings from ANT research regarding such notions as "market devices," "market mediation," and "market *agencements*." The theory is backed up by an analysis of a local food system involving five small fishermen and the delivery of fish to 1500 households in the area around Nantes in France. Seeing this local food system as a "market *agencement,*" *i.e.*, a sociotechnical arrangement capable of market action, makes it possible to underscore the many hybridities that compose alternative food networks: those of human, material, and natural entities; the local and global scales; and production and consumption; but also that of alternative and conventional actors and devices.

Keywords

Actor-Network Theory, Alternative food networks, Hybridity, Local food systems, Market agencements

1. Introduction

From the late 1990s to the present, two sets of papers have in parallel put the stress on the hybrid nature of the phenomena studied in rural and agri-food studies. The first one aimed to show the relevance of using Actor-Network Theory (ANT) to describe biotechnology, the countryside, food crises, the agri-food industry, and so on, as "hybrid collectives" that mix human, natural, and technological entities (Busch and Juska, 1997; Goodman, 1999; Lockie and Kitto, 2000; Mansfield, 2003; Murdoch, 2003; Stassart and Whatmore, 2003; Whatmore and Thorne, 1997). In these papers the aim was to exclude binaries and simplistic oppositions, such as "local vs global," "urban vs rural," or "natural vs cultural," and to build a more relational reasoning. It was also to refuse *a priori* explanations and causalities such as the one that understands the structure of consumption as the consequence of the structure of

production. At the same time, another set of papers aimed at questioning a more specific dichotomy concerning the opposition between alternative and conventional food networks (Hinrichs, 2003; Sonnino and Marsden, 2006). In these papers, the authors claimed that this dichotomy inspired a "dualistic" or "binary" reasoning (Kneafsey *et al*., 2008; Morgan *et al*., 2006; Rosin and Campbell, 2009) that exaggerated the separation and differences between local and global food systems, organic and conventional agriculture, etc. This sometimes gave rise to the assertion that alternative initiatives should be seen as "hybrid spaces" that combine conventional and alternative characteristics (Ilbery and Maye, 2005; Watts *et al*., 2005). These two sets of research claimed similar purposes, such as avoiding binaries and dualisms, and referred to the same word "hybridity," but remained mainly unconnected. As we shall show in this paper, the research on alternative food networks did not use the ANT's framework to work on the alternative-conventional hybridity. In a nutshell, "hybrid spaces" have not so far been studied as "hybrid collectives."

Callon's ANT-inspired "Sociology of market *agencements*" (Callon *et al.*, 2013) offers an opportunity to fill this gap. "Market *agencements*" are hybrid collectives, "sociotechnical arrangements" of human and nonhuman entities that are capable of market action (Çalışkan and Callon, 2010). For Michel Callon, thinking in such terms makes it possible to focus on the operations of which markets are composed. It also enables one to envision a market's design to be the upshot of a social engineering operation, an *in vivo* experiment aimed at achieving specific objectives (Callon, 2009). Studying alternative food networks as market *agencements* thus seems to be particularly relevant, especially when these alternative food networks have market actions.

To show the relevance of this approach we are going to use it to study a fish-box scheme called "AMAP Poisson" (Fish AMAP) created on the west coast of France. AMAPs (*Associations pour le Maintien d'une Agriculture Paysanne)* or "Small Farming Support Associations" are the French equivalents of North American "Community Supported Agriculture" schemes. As we shall explain in detail later on, the fish AMAP's creation was inspired by the core principle of vegetable AMAPs, *i.e.*, a contractual arrangement between a producer and a group of consumers who subscribe to boxes of produce for a set price but with uncertain contents (Lamine, 2005). However, this AMAP is unusual due to its size. Whereas French AMAPs generally involve some fifty or so households and a vegetable farmer, for 2015 "AMAP Poisson" arranged for the delivery of 1500 boxes of fish from five small fishing vessels nine times a year. What is more, as we shall see, a market intermediary (a fish

wholesaler) and a host of material devices (an auction hall, refrigerated warehouses and trucks, and so on) make this AMAP very different from the usual vegetable AMAPs. Seeing the fish AMAP as a "market *agencement"* will entail describing in detail all of the natural, technical, and human entities that compose it. That will enable us to grasp what underpins this alternative food network's agency, *i.e.*, its ability to act, and to analyze the results of its action.

We shall do this in four steps. We shall start with a review of the rural studies literature and point out what seems to us to be a missed opportunity between ANT and the criticism of the alternative-conventional dichotomy that is specific to alternative food systems research. The next section will present the analytical framework of the sociology of market *agencements* that has grown up over the past ten years or so around notions such as "market mediation" and "market devices." We shall explain why this literature may be particularly well-suited for studying alternative food networks. We shall then present the AMAP Poisson case. We shall describe the history of its conception and then the actions of which this market *agencement* is capable. The last section will be devoted to discussion of the foregoing and our conclusions. We shall underscore the multiple hybridities that the sociology of market *agencements* reveals: those of human, material, and natural entities; the local and global scales; and production and consumption; but also that of the alternative and the conventional.

2. Alternative food networks and ANT: a story of missed opportunity

In this section we shall stress the absence of a junction between two issues. The first one, which is specific to alternative food network research, aims to go beyond an "alternative-conventional dualism" by means of notions such as "hybrid spaces." The second one, developed in the vaster field of rural and agri-food studies, strives to apply ANT in order to grasp rural, agricultural, and food phenomena as "hybrid collectives."

2.1. Alternative food networks as "hybrid spaces"

In opposing what were called, depending on the author, "binary thinking" (Hinrichs, 2003; Milestad *et al*., 2010; Morgan *et al.*, 2006), a "divide" (Sonnino and Marsden, 2006), or an "alternative-conventional dualism" (Kneafsey *et al*., 2008; Rosin and Campbell, 2009), a great many studies have shown the importance of not considering conventional and alternative food networks to be separate worlds with opposite ways of functioning. First,

research has shown that the motivations of participants in alternative systems are not necessarily very different from the motivations that are expressed in conventional systems. For example, in the case of local food systems, consumers search for tasty products, remain cost-conscious, and ask for a diversified product range. The producers, for their part, want to sell their produce for a good price and do not always want to engage in lengthy discussions with consumers (Hinrichs, 2000; Kirwan, 2004; Weatherell *et al.*, 2003). Second, various authors have stressed that most of the consumers and farmers involved in alternative schemes also participate in conventional ones. The boundaries blur even more if we consider that some alternative initiatives rely in part on infrastructure from conventional food systems, such as industrial slaughterhouses and supermarket chains (Clarke et al., 2008; Cleveland et al., 2014; Lamine et al., 2012; Milestad et al., 2010). This type of finding has prompted Brian Ilbery and Damian Maye to speak of "hybrid spaces" (Ilbery and Maye, 2005). Similarly and more recently, other researchers have been speaking about "hybrid food value chains" or "hybrid values-based supply chains" to describe approaches that combine alternative and conventional actors, infrastructure, and aims (Bloom and Hinrichs, 2011; Klein and Michas, 2014). Third, many studies have also stressed the tensions generated by relations with players and infrastructure from conventional systems. The research on the conventionalization of organic agriculture initiated by Julie Guthman (Guthman, 2004) and the more recent studies of fair trade's *mainstreaming* (Jaffee, 2010; Raynolds, 2012) have both shown that alternative food networks are not immune to the "conventional" logic of industrial production, unstable jobs, price competition, and failure to provide consumers with information. Alternative food networks' alternativeness is a variable characteristic, or rather a series of variable characteristics that the initiatives achieve to variable extents (Kneafsey et al., 2008; Watts et al., 2005).

To cover these alternative-conventional hybridities, research on alternative food networks has mobilized various theoretical references but has not relied heavily on ANT. Callon, Latour, and Law are cited in many articles, but their writings are not core elements of the authors' analytical frameworks. The case of Murdoch, Marsden, and Banks' article (Murdoch *et al.*, 2000) illustrates this tendency quite well. Even though Murdoch and coworkers refer to ANT quite at length, their analysis of a Welsh organic yoghurt company's trajectory relies mainly on the economy of conventions (Storper and Salais, 1997). Similarly, the "economy of qualities" (Callon *et al.*, 2002) has been cited a great deal in studies of alternative food networks, but only insofar as the idea of a multitude of definitions of quality, similar to that

defended by the economy of conventions, is concerned. The more precise theoretical framework of the "economy of qualities" arising out of ANT and revolving around the "attachments" that underpin the market (Le Velly and Goulet, 2015; McFall, 2009) has not been mobilized in such investigations.

2.2. Actor-Network Theory's "hybrid collectives"

And yet, ANT was presented in the late 1990s and early 2000s as offering opportunities to break with several of the dichotomies in rural and agri-food studies. David Goodman, for one, wrote a veritable plea in defense of the imperative need to consider food crises, agrobiotechnology, and organic agriculture to be "hybrid collectives," *i.e.*, associations of humans and non-humans, social beings, and natural beings (Goodman, 1999). Sarah Whatmore and Lorraine Thorne also saw ANT as a tool for "break[ing] down the nature-society binary through the idea of hybridity" (Whatmore and Thorne, 1997, p. 239). In taking up the example of fair trade networks, they stressed in particular the actions of the material devices in these "hybrid collectives" (see also Busch and Juska, 1997; Jones, 2006; Mansfield, 2003; Stassart and Whatmore, 2003). They also underscored the extent to which this perspective led one to break with the micro versus macro and local versus global dichotomies. From the ANT standpoint, global and local phenomena must be considered together: The global exists only through its local implementations and local interactions cannot be understood without analyzing the more extensive sociotechnical networks to which they belong (Murdoch, 1998).

In these various writings that claim to come under ANT, thinking in terms of hybridization means refusing the *a priori* explanation of a dichotomy "between classes of phenomena that drive and those that are driven" (Goodman, 1999, p. 18, quoting Law, 1994). Agency, that is, the ability to act, is not a strictly human attribute. It is seen as a collective, hybrid phenomenon resulting from the associations that are established among human, material, and natural entities. Likewise, analysis does not give priority to analyzing global forces on the one hand and local interactions on the other, but thinks of the two processes as mutually determined (Latour, 2005). Finally, in the more specific field of agri-food studies, ANT has also been cited as a reference allowing one to grasp the determinants and effects of production and consumption symmetrically (Lockie and Kitto, 2000).

On the other hand, most of these publications have not covered the matter of alternative-conventional hybridity. In the case of those that mention alternative food networks, they even

give out an ambiguous message reflecting a relatively dichotomous way of thinking. Whatmore and Thorne (1997), for example, showed that fair trade networks were not totally independent from conventional trade infrastructure, but they also maintained a type of reasoning in which they identified a type of "ordering of connectivity" specific to fair trade that was totally different from that of conventional trade. Similarly, when Goodman (1999) mentioned the tensions around the content of organic farming standards in the U.S., his reasoning brought to the fore above all a clear-cut opposition between authentic and industrial organic farming.

3. The Sociology of market *agencements*

"The sociology of market *agencements"* is a term that covers a series of studies in economic sociology inspired by ANT. These studies have been and continue to be associated with terms such as "economy of qualities" (Callon *et al.*, 2002), "market devices" (Muniesa *et al.*, 2007), "market attachments" (McFall *et al.*, 2015), "market work" (Cochoy and Dubuisson-Quellier, 2013), and "market mediation" (Dubuisson-Quellier, 2013). We, however, have opted for the newly coined term "market *agencements*" because it is used in the title of a publication edited by Callon that consists of a selection of major articles belonging to this approach (Callon *et al.*, 2013) and it also appears to be particularly suitable for analyzing alternative food networks.

A market *agencement* is a hybrid collective capable of market action (Çalışkan and Callon, 2010). Two steps are necessary to explain what this definition covers. First, we can explain that the French term "*agencement"* is equivalent to "assemblage" or "arrangement" in English. Studying actual markets as *agencements* thus underscores the fact that markets are "sociotechnical arrangements" or "hybrid collectives" composed of human and nonhuman elements. A market is made of "attachments" involving the goods and services that are traded and supply- and demand-side players, but also a set of "market devices" and "market professionals." Examples of market devices include quality standards and buying guides (Karpik, 2010), product packaging and supermarket carts and shelves (Barrey, 2007; Cochoy, 2004, 2008), trading rooms and algorithmic configurations (Callon and Muniesa, 2005; Hardie and MacKenzie, 2007), etc. "Market professionals," as Franck Cochoy and Sophie Dubuisson-Quellier dub them, then have a key role in establishing these devices. Their "task is 'to work on the market', *i.e.* to construct it, move it, organize it, manage and control it - in short, 'agencing' transactions" (Cochoy and Dubuisson-Quellier, 2013:4). This perspective

does not see economists and marketing specialists as outside observers, but rather as actors who contribute actively to the market's arrangement (Araujo *et al.*, 2010; MacKenzie *et al.*, 2007). Emphasis is likewise put on the actions of new product designers (Reijonen and Tryggestad, 2012), prescribers (Dubuisson-Quellier, 2013; Karpik, 2010), retailers (Barrey, 2007; Le Velly and Goulet, 2015; Mallard, 2012), wholesalers, distributors, and other market intermediaries (Bernard de Raymond, 2011; Kjellberg, 2007).

Second, as (Callon, 2008) explains it, the term *agencement* also has the advantage of being close to the term "agency." Talking about *agencement* is thus a way to underscore the hybrid collectives' capacity for action. According to ANT, the ability to act is situated in actor-networks rather than in individuals. Like cognition, agency is distributed (Callon and Muniesa, 2005; Hardie and MacKenzie, 2007). Market *agencements* are thus hybrid collectives that are able to take market action, that is to say, they can organize the matching of supply and demand, appraise goods, set prices, and transfer ownership (Çalışkan and Callon, 2010; Callon and Muniesa, 2005). When it comes to the founding of such a collective one must think of market devices and professionals as "mediators." In line with the meaning that is given to this term in ANT (Hennion, 2015; Latour, 2005), these mediators are not passive intermediaries between pre-existing supply and demand. "Market mediation" is an operation whereby the supply, demand, and market are created in the same movement (Karpik, 1996). For example, shops and vendors participate in educating consumers, notably to explain the products' uses (Mallard, 2012). Similarly, taste tests influence what will finally make up the supply (Callon *et al.*, 2002). Even more obviously, both tourist guides and the shopping guides that are written by environmental associations act on demand by educating and equipping consumers, but they also act on supply by establishing a reference frame of practices that growing numbers of people are assumed to expect (Dubuisson-Quellier, 2013; Karpik, 2000).

The sociology of market *agencements* is a particularly relevant analytical framework for studying alternative food networks, for two reasons. First, it yields a better understanding of markets, for describing market *agencements* enables one to understand what they are made of and what they do. In this respect, this analytical framework definitely establishes the fact that the market is neither intrinsically good nor intrinsically bad; instead, markets' effects must be seen as the results of their various arrangements. Callon then urges his readers to conduct "*in vivo* experiments," to engage in "social engineering," so that the markets achieve the ends that their designers set (Callon, 2009). Paraphrasing Emile Durkheim, he wrote in the postface to

Callon *et al.* (2013) that the sociology of market *agencements* "would not be worth an hour of pain" if it did not make it possible to act on markets' designs and effects. The establishment of alternative food networks, especially those that give considerable place to marketing issues, refers to these ideas in no uncertain manner.

The relevance of this approach for studying alternative food networks must nevertheless be proven by putting it into practice. The sociology of market *agencements* has effectively been mobilized little for such studies to date. The work of Sophie Dubuisson-Quellier and her co-authors are a notable exception, but their publications have concentrated more on consumption than on market *agencements* as a whole (Dubuisson-Quellier and Lamine, 2008; Dubuisson-Quellier *et al*., 2011). More recently, the article by Henry Buller and Emma Roe on the creation of a market for eggs produced on farms mindful of animal welfare (Buller and Roe, 2014) is a wonderful application of the sociology of market *agencements.* Nevertheless, the authors did not strive in this article to contribute to the literature on alternative food networks (see as well Loconto, 2015; Onyas and Ryan, 2015).

4. The "AMAP Poisson" as a market *agencement*

Studying the Nantes-area fish AMAP provides a good opportunity for showing the merits of conceiving of alternative food networks as market *agencements*. We shall start by allowing for the conditions under which the fish AMAP was devised, tested, and then stabilized, through work that could be called "market mediation engineering." We shall then describe the action of this market *agencement, i.e.*, what the hybrid collective that it created is capable of doing.

For this we shall rely on a field investigation carried out in the course of 2013 and in which three sources of information were combined. We first studied the archives of the Nantes-area fish AMAP and its founders. Of particular interest is the fact that the Nantes region's network of AMAPs published minutes and reports on the fish-box venture throughout the process of the association's creation and the scheme's implementation. We also conducted in-depth interviews of four key individuals in the fish-box association's development, that is, an elected official, a fisherman, an employee of the Isle of Yeu's seafood wholesaling cooperative, and a consumer who coordinates the scheme in Nantes. Finally, we made a great many direct observations of the various steps in the chain, going from the fishermen to the consumers, in order to put questions to the protagonists on the spot and understand better how the fish-box association worked.

4.1. The fish AMAP's creation: market mediation engineering

4.1.1. AMAP Poisson: From an idea to the first trial runs

The fish AMAP's history began in 2009 with the idea of a local official on the Isle of *Yeu*. This person was fully aware of the island fishermen's economic problems. Whereas the isle had a fishing fleet of 126 vessels in 1990, the number dropped to 61 in 2001 and a mere 36 today. In stumbling upon the AMAP model during a stay on the continent in 2009, he saw a way to stem this outgoing tide. Such associations were designed to save local family farming. Might they not also be able to help defend local small-scale fishing? He thus got in touch with Denise and Daniel Vuillon, who had created the first French AMAP in 2001, and they in turn referred him to the Greater Nantes AMAP network.

At the time, some fifty AMAPs were already operating in Loire-Atlantique Department.[1] What is more, their organization was particularly advanced compared with the situations in other regions of France. The local AMAPs thus already belonged to a departmental network in which they exchanged information about their practices and coordinated some of their activities. Rather than turning to one or two AMAPs in particular, the Isle of Yeu official could thus turn to the departmental association and reach all of the network's members. Given the first positive feedback he got, he convinced a few fishermen on the Isle of Yeu to get on board the project. Fertile dialog between these fishermen and members of various AMAPs in the department thus began. A first meeting was held on the Isle of Yeu in December 2009 and a second one in Nantes in February 2010. Then two working groups were set up to deal with two typical market mediation issues, namely, drafting a charter and drawing up a logistic plan.

The consumers involved in drafting the fish AMAP's charter relied on the National Charter of AMAPs, which had originally been drafted for AMAPs for farm produce. So, there effectively exists a charter in France to which all consumers and producers wishing to create an AMAP should refer. This charter was first drawn up in 2003 by the initiators of the first AMAP in Provence and then updated by the inter-AMAP national network in 2014. It sets the major operating principles of AMAPs, such as the payment of a fair price or the choice of

[1] Loire-Atlantique is one of France's 101 "departments" (*i.e.*, regional administrative districts). Its total population in 2011 was 1.3 million, with Nantes accounting for close to 288,000.

agroecological production patterns. The *Charte Nationale des AMAPs* (AMAPs' National Charter) thus served as a reference for creating the fish AMAP.

One major problem at this stage was to allow for the reality of the world of fishing, about which the existing AMAPs' members knew absolutely nothing. They thus researched the subject, getting information from environmental associations and specialized fisheries consultants. Then, they submitted a first draft of the charter to the fishermen. A few additional changes were made and the charter was finalized. It places special emphasis on environmental criteria (prohibiting trawling, safeguarding spawning grounds, throwing juvenile fish back into the water, and fishing locally) and touches upon some occupational issues (occupational safety and training for the fishermen). The merits of this charter must not be underestimated. First of all, it was a major step in creating the collective. Without the work that went into drafting the charter, the association's future members would doubtless have hesitated to get on board. It was a sort of guarantee for them. Next, this charter is like a boom that bars entry to vessels that do not observe its principles. For the fishermen involved, this meant that they would not suffer from competition from fellow fishermen who trawled, for example, and could otherwise have approached the fish-box association's customers.

The logistics working group had to solve several coordination problems concerning the preparation, shipping, and distribution of the fish boxes. These problems were all the trickier in that fish is a highly perishable commodity that calls for strict maintenance of the cold chain. What is more, Nantes is some 100 km (60 miles) from the Isle of Yeu, beyond the 30 kilometer limit from the fishermen's home port within which they may sell their catches directly to consumers without health department approval.

INSERT MAP 1 HERE: Locations of the fish-box scheme's 17 distribution points in January 2015.

For the first "test" delivery of 240 boxes that took place in spring 2010 an important choice was made: The preparation and shipping of the fish boxes to the continent were entrusted to an intermediary, the Yeu Marée seafood wholesaling cooperative, which had the necessary resources to carry out these operations correctly and get health department approval. This seafood wholesaling cooperative is somewhat unusual in that its members are the isle's fishermen but it operates in the isle's fish auctions just like any other middleman. In economic terms, the "AMAP Poisson" commodity chain thus starts with a first transaction by means of which the cooperative wholesaler buys the catches from the association's five fishermen at the local auction (see Figure 1 below). The prices are the same as those paid by

other buyers and highly dependent on daily fluctuations in the supply. Then Yeu Marée packs the boxes and ships them to refrigerated warehouses at Fromentine, a port on the continent.

4.1.2. The market agencement's stabilization

After this first trial, the departmental AMAPs' network sent out a questionnaire to all the consumers who had taken part in the experiment. The response was overwhelmingly positive when it came to satisfaction with the quality of the fish provided. Eighty-two percent of the respondents also expressed their attachment to the charter, which was deemed "indispensable to continue this scheme."

The only criticism that was truly expressed concerned the packaging, with which 15% of the respondents were unhappy. They wondered in particular about the rather unecological solution that had been chosen, namely, large styrofoam crates that were neither reusable nor taken back by the fishermen. These boxes effectively have been the subject of repeated discussions within the fish AMAP since this first experiment in 2010. Members of the AMAP met with an official from the Departmental Directorate for Protection of the Population (DDPP) – a French government department in charge of food safety – who explained that reusable boxes would not meet the health rules in effect. Recycling options were then considered, but have not led to any solutions to date. Putting such emphasis on these boxes is not anecdotal. From the sociology of market *agencements* standpoint, these boxes are an important device. Without them, market mediation is not possible and the market *agencement* does not exist. With them, the fish AMAP acts and has effects, especially environmental ones.

Another important device that was defined in the wake of the first trial is the standard contract between the fishermen and consumers. Here, too, the fish AMAP's creators mined the vein of the vegetable AMAPs' principles. As in the vegetable schemes, the fish-box scheme's members committed to a subscription without knowing exactly what their boxes would contain. Specifically, the consumers were committed to buying nine monthly fish boxes at a set price of 30 euros apiece with no deliveries in December, July, and August. They also accepted not knowing the boxes' contents in advance. What is more, the boxes' weights were set at between 2.5 and 3.5 kg, which allowed the fishermen to fill them unequally depending on their catches' volumes and the value of the species provided. Note was even taken officially in the discussions that led to the contract's formalization that the fishermen would be allowed to propose species that were unfamiliar to the consumers and fetched low prices in

the usual market channels. The AMAP consumers also accepted the risk of the fishermen's having to cope with various unforeseen events and thus gave the fishermen the possibility of canceling and postponing a delivery. In exchange, the fishermen committed to a maximum interval of 48 hours between landing the catch on board and delivering it and to complying with the principles enshrined in the charter. Finally, the fishermen agreed to be present at the distribution sites at least once a quarter – but we shall come back to this point.

The first trial in the spring of 2010 had finally convinced the fishermen of the merits of this fish-box scheme. They thus created a company to carry out this operation, an economic interest group (EIG) called Les Pêcheurs de l'île d'Yeu.[2] This EIG steps in after Yeu Marée's work and takes charge of the rest of the logistic operations up to the boxes' delivery to the consumers. A second economic transaction is thus conducted, whereby the EIG buys the packed boxes from the cooperative. The EIG then carries out the nine monthly deliveries to seventeen pick-up points. To do this, it bought a refrigerated truck and hired a former fisherman who had retired to Nantes as its driver. The day after each delivery the EIG cashes the checks of the consumers who come to the pick-up point in question. Finally, it pays out its operating profit to the fishermen after deducting the cost of buying the boxes from Yeu Marée and its delivery expenses.

INSERT FIGURE 1 HERE: The fish-box scheme's financial and commodity flows

Finally, one or two consumers at each of the distribution points serve as coordinators. On the one hand, they liaise with the EIG: They give it the total number of boxes to deliver at the start of the year, sometimes adjusting these numbers as the months go by to allow for possible departures from or newcomers to the scheme. They also collect all the checks from the subscribed consumers at the beginning of the season and draw up the delivery schedule with the fishermen and EIG's driver. Finally, they relay the consumers' demands and complaints to the fishermen.

This sociotechnical assemblage became stabilized in fall 2010. Since then, changes have been made in some facets but without affecting its structure fundamentally. The innovation phase of the first months gave way to a phase of relative stabilization of the fish AMAP's relational foundations. The market *agencement* expanded with the addition of new pick-up points, which rose from seven in 2010 to seventeen in 2015. New devices were also added. The

[2] The Economic Interest Group (*Groupement d'Intérêt Economique* – GIE) is a legal form of association under French law that allows enterprises to group some of their activities together.

coordination work was facilitated in late 2013 by the introduction of a computerized system developed by the Loire-Atlantic AMAPs network. As a result, registering with the fish AMAP is now done electronically and centralized via a common Internet platform. This platform is ultimately expected to allow online payments as well. The fish AMAP is thus continuing to evolve. Nevertheless, the fundamental choices made at the end of the innovation phase, such as the charter, contracts, and Yeu Marée's intermediation, have remain unchallenged since 2010.

4.2. The fish AMAP's action and effects

Saying that the fish AMAP is a market *agencement* refers us to two ideas. The first one stresses the heterogeneousness of its components. We shall develop this point in the discussion, but can already note that this hybrid collective is composed of fishermen, fish, and consumers, but also the isle of Yeu's fish auction, the seafood wholesaler Yeu Marée's workers and facilities, the EIG's employee and equipment, a charter and contracts, checks and checking accounts, customer satisfaction questionnaires, and so on. The second idea emphasizes this hybrid collective's agency. The fish AMAP's market agency is distributed over its component entities. Reasoning in this way enables us to account for the fish AMAP's effects. The fish AMAP's effects are effectively diverse and may be deemed positive at some times and negative at others. We are going to look at its effects in the areas of consumer satisfaction, added value for the fishermen, and restoring links between producers and consumers. With regard to this last category, we shall see that the consumers considered the market *agencement* to fall far short of the mark. From the standpoint of social engineering specific to the sociology of market *agencement*s, adding new devices to the fish AMAP might be considered to overcome this failure.

4.2.1. The consumers' satisfaction

A first noteworthy effect of the fish AMAP is great consumer satisfaction. At the end of the 2012/13 season the departmental network of AMAPs sent out a satisfaction survey questionnaire to the fish AMAP's consumers. The boxes' quality-to-price ratios and the variety of fish delivered were deemed satisfactory or very satisfactory by 97% and 87%, respectively, of the 810 respondents. In addition, 87% of the respondents expected to renew their contracts the next season. Beyond these figures, the rising number of distribution points also attests to the fish AMAP's commercial success. There were seven distribution points in September 2010, eleven in September 2012, fourteen in September 2013, and seventeen in

September 2014. Each of these distribution points represents at least eighty contracts. Finally, some 1500 households are participating in the fish AMAP this year (2015).

The seafood wholesaling cooperative Yeu Marée's action within the fish AMAP is decisive in explaining this commercial success. Concretely, the pace of Yeu Marée's work is set by the schedule of nine monthly deliveries. The head of the cooperative knows in advance the dates and exact number of boxes to make up for each delivery. He also knows to which of the seventeen pick-up points the deliveries will be made. This is important, for in theory the consumers at each distribution point have contracts with a specific fisherman. So, two of the five fishermen involved in the fish-box scheme are linked to four subgroups, while the three others are linked to three subgroups. In line with the delivery that is scheduled, Yeu Marée reminds the relevant fisherman that he absolutely has to plan to sell his catch at Isle of Yeu's fish auction, for the fishermen are effectively free to sell their catches where they want to and may prefer to sell at another market, especially that of Sables d'Olonne, certain days. Yeu Marée must be certain that it will be able to meet the additional demand from the EIG on the appointed day. Nevertheless, to ensure its security of supply, it may pack the boxes with fish caught by the EIG's other members. This possibility is contrary to the vegetable AMAPs' general principles (AMAPs Charter), but tolerated in the case of the fish-box scheme's operation.

Yeu Marée has sole responsibility for selecting the fish boxes' contents. This responsibility is not shared with the consumers, who give up their freedom of choice in subscribing to the scheme, or the fishermen or their EIG, which delegates this task to the cooperative entirely. The boxes' contents must meet several requirements. The first ones are linked to the consumers' expectations and satisfaction. Yeu Marée strives first of all to make up uniform boxes for a given delivery so that all the consumers are treated equally. Next, it tries to allow for the consumers' need for diversity, as the recipients will not accept repeated deliveries of more common species. At the same time, the cooperative tries to compose packages that will generate profits for the EIG, at least when one works out the average over the year. It knows that the consumer pays 33 euros for each delivery. It also knows the prices at which the fish that may go into the boxes were bought, the costs of the services that it bills the EIG, and the EIG's own operating expenses. His fine knowledge of fishing, of its seasonality and ups and downs, enables Yeu Marée's manager to strike a balance among the various constraints on the boxes' composition. He can act by adjusting the contents in line with the prices being paid at the moment. For example, when a noble species is abundant and its price at auction drops,

the cooperative will be able to add this species to the boxes. The consumers will be particularly happy with the delivery and more tolerant if, later on, a subsequent delivery contains commoner, less sought-after species. In a nutshell, through this work of making up the fish boxes, the cooperative achieves a compromise between the fishermen's and consumers' interests.

4.2.2. Great added value for the fishermen

The fish-box scheme's economic performances for the fishermen are also remarkable. Based on the EIG's data, we could reconstruct its costs and income structure for 2013. The EIG sold each box for 33 euros. Next, the EIG's own expenses, linked to delivering the boxes, could be estimated at 6 euros per box. Finally, the EIG bought the boxes packed by Yeu Marée at an average price of 23.5 euros, 4.5 euros of which paid for the cooperative's services and 19 euros of which corresponded, on average, to the cost of buying the fish. All told, the EIG thus posted a mean profit margin of 3.5 euros per box, or a total of close to 45,000 euros for the year. This margin was added to the income that the fishermen got from selling their catches at auction at the same prices as those paid at their other sales outlets. It was thus the added value that their participation in the fish-box scheme generated. This added value is all the more remarkable in that it requires very little additional work on their part. As mentioned earlier, this is not a direct sales scheme comparable to what goes on in other fish-box schemes, in which this added value has to be considered in light of the additional working hours and mental workload required to organize the selling (Jarosz, 2008).

The added value generated by the scheme is definitely to be put down to the seafood wholesaling cooperative's experience, thanks to which the boxes can be sold at an acceptable price. However, it is also due to the cooperative's manager's decision not to make a profit on the boxes that are sold to the fish AMAP's EIG: The manager told us that the cooperative was not losing money on the operation, but just covering its costs. He also pointed out that the AMAP members' volunteer work as coordinators played a role in generating these 45,000 euros of yearly added value. Finally, this added value is also the result of the consumers' annual discussions about the fish boxes' prices. So, the consumers decided in September 2012 to raise the price from 30 to 33 euros to allow for increased fishing costs and ensure a remunerative price.

The rules by which the added value generated by the fish-box scheme is apportioned are also particularly interesting. It is thus possible to discern a conventional distribution rule, such as

is seen in the sector's usual organization, and an alternative distribution rule specific to the fish AMAP's added value. So, ocean fishing workers are usually paid a share of the earnings. The product of the catch, that is to say, the turnover derived from selling the catch at auction, is divided into two shares. The first one goes to the fishing vessel, that is to say, the capital, whereas the second share pays for the labor. The share that is reserved for the crew is divided according to the positions that the crewmen occupy on board. In Pays-de-la-Loire, the breakdown according to the most general scenario is as follows: The boat's share is 60% of the total and the remaining 40% for the crew is broken down according to the following formula: The captain gets 2 shares, the first mate and engineer each get 1.5 shares, and each sailor gets 1 share of the crew's portion. If we consider a small 12-meter netter manned by a crew of three – the owner and two sailors – as can be found among the signatories to the fish AMAP's charter, the income on the catch's sale at auction is distributed as follows: 80% for the owner (60% for the vessel plus half of the crew's total share) and 10% for each sailor.

This model of distribution was adopted for the first step of the fish AMAP scheme, that is to say, the catch's sale at auction. However, it was not adopted by the EIG fishing vessel owners for distributing the added value that the scheme generated. In agreement with the consumers, they thus decided to share out this profit margin equally among the crew members, giving one share to each crewman. So, to take the case of a two-man crew in 2015, if this vessel had contracts with 250 AMAP members, each crewman got an annual individual bonus of 2,625 euros, or about 10% of his annual net income – a sizable increase.

4.2.3. A weak reconnection between fishermen and consumers

Finally, the market *agencement* creates a weak "reconnection" (Kneafsey *et al.*, 2008) between the fishermen and consumers in the fish AMAP. In this regard, care must be taken not to overestimate this tie in the vegetable AMAPs, for it is often not as strong as their promoters' statements might lead one to believe, for various reasons: for instance, because some consumers simply pick up their weekly boxes of vegetables without striking up a conversation with the truck farmer (Dubuisson-Quellier *et al.*, 2011). However, while such conversations are possible in a vegetable AMAP, the fish AMAP's market *agencement* makes them much more unlikely.

In principle, the fishermen are supposed to participate in the boxes' distribution at least once a quarter, and thus travel to the pick-up points once a month, on average, if they have contracts with three subgroups. The text of the standard contract between fishermen and consumers is

not highly binding, however. In the section on the fishermen's commitments it is written, "I shall be present on the distribution site at least once a quarter. When I cannot be there, I shall be represented by another fisherman or someone familiar with the project." They are in fact very lax in complying with this obligation, for it means traveling on the continent and even staying there overnight in order to catch the next boat back to the island the next day, in which case they can even lose a day of fishing. It is not a simple matter of chance that the fishermen, acting through the EIG, hired a person living in the Nantes area to make the deliveries. Nor is it a coincidence that they hired a retired fisherman, that is, someone able to answer the consumers' questions about fishing and fish.

Still, the scheme's consumers were not totally happy with this solution. In their answers to a survey conducted by the departmental network of AMAPs in May 2013, 44% of the fish-box scheme's consumers felt that information about the fishermen's activity was scant or unsatisfactory. They wanted to know the fishermen better and know more about their working conditions. They expressed the need for texts and snapshots presenting the fishermen as an absolute minimum and the desire to meet them on the Isle of Yeu. This request shows, moreover, that the intermediation is not the only problem involved; the absence of such devices in the market *agencement* exacerbates this dissatisfaction even more.

5. Discussion and conclusions

The sociology of market *agencements* can be a useful theoretical framework to renew our understanding of alternative food networks. Four kinds of hybridity can be put forward to summarize the lessons we can learn from this perspective.

First of all, we see the extent to which alternative food networks are hybrid collectives combining humans and non-humans. In this connection we must underscore the market mediations required to turn the fish that is caught into the specific merchandise that it becomes in the fish AMAP. These mediations are effected in part by the "market professionals" in the picture (Cochoy and Dubuisson-Quellier, 2013). We highlighted in particular the central role of the Yeu Marée cooperative, which turns the catches into commercially attractive and economically viable fish boxes. These mediations are also effected by actors who are not "professionals" but likewise do some "market work." Here we think of the consumers *cum* volunteer coordinators, who play a central liaison role between the consumers and fishermen. Next, the sociology of market *agencements* enables us to emphasize the many "market devices" (Muniesa *et al.*, 2007) that make the fish AMAP

possible, *i.e.*, charter, contracts, customer satisfaction surveys, auction, checks, Internet site, and so on. Moreover, without the styrofoam crates and refrigerated warehouses and truck the fish could not be sold as it is in this market arrangement due as much to its natural characteristics as to French health standards.

The combination of all these social, natural, and material entities is definitely what made the fish AMAP's creation as a market *agencement,* as a hybrid collective capable of market action, possible. The consumers' satisfaction in this connection deserves to be seen as the result of a consumer attachment process (Callon *et al.*, 2002; Le Velly and Goulet, 2015). The fish AMAP exists and acts because consumers have established a singular, lasting relationship with the products that it sells. The same goes for the fishermen and other actors in the collective. These attachments are of course the results of the actions of human beings, but they also result from the actions of natural entities and material devices. The fish AMAP is built upon fresh, wild fish, that is to say, merchandise that comes from fishing. That means a form of production with extremely unpredictable outputs and a highly perishable merchandise that requires strict observance of the cold chain and rapid consumption. These fish played a role in the form taken by the market *agencement* that was established, even though they did so unwittingly (see also Dwiartama and Rosin, 2014). We think that we have likewise shown throughout this article how the material devices acted. One need only remember how vital the fish AMAP's charter and contracts were in first attaching the consumers and fishermen to the market *agencement*. Taking inspiration from the work on the sociology of innovation that has come out of ANT, we can say that these devices were true "intermediary objects" (Vinck, 1999), the founding objects of a hybrid collective allowing new directions in collective action. At the end of the day, the natural entities, material devices, and human actors must all be considered to be "actants" (Latour, 2005) participating in the market *agencement'*s formation.

Local-global hybridity is also at the heart of our understanding of this alternative food network. For example, the association's charter, if not the very principle of the fish AMAP, doubtless would not exist without the previous existence of the vegetable AMAPs and AMAPs' National Charter in France. In studying the process of the fish AMAP's inception, we saw as well that the existence of a departmental network of AMAPs was likewise decisive as a structure representing all the AMAP consumers in Loire-Atlantique Department. We also see that the content of the fish AMAP's charter reflects the information about industrial fishing's misdeeds of which the association's designers were made aware by reading

documentation produced by various environmental associations. If one realizes that the fish AMAP also relies on Internet and the banking system (payments by checks), it becomes perfectly clear that this market *agencement* combines the local and global scales.

Through the sociology of market *agencements* it is also possible to return to Lockie and Kitto's (2000) ambition of analyzing the relations between production and consumption symmetrically. The issue here is not that of postulating that supply- and demand-side actors generally have the same abilities to determine market arrangements and actions. The situation of the fish AMAP, in which the market *agencement* was designed jointly by the fishermen and consumers, is one possible way of proceeding, but other market *agencements* can be marked by great inequality in the various actors' "agencing" (Cochoy, 2014) abilities (Callon and Muniesa, 2005; Trompette, 2007). On the other hand, this sociology invites one to see supply and demand as phenomena that cannot be understood in isolation from all the mediations that connect and constitute them (Karpik, 1996). The situations of the creation of innovative market *agencements* such as that of the fish AMAP illustrate particularly well the relevance of this analytical rule. The fact that fishermen and consumers, even those wishing to trade with each other, exist is not sufficient for the fish AMAP to exist. All the market mediation issues must be settled as well. By doing this, the AMAP's designers also "qualified" the supply and demand on this market (Callon *et al.*, 2002): In particular, the fishing must be artisanal and the consumers must accept not knowing what their fish boxes will contain.

The originality of our article's contribution lies in our putting forward a fourth hybridity, one that had not yet been envisioned by researchers inspired by ANT, namely, that of conventional and alternative "actants". This hybridity specifically concerns alternative food network research. The term "hybrid" has regularly been put forward in such research to break with the hypothesis of a great divide between conventional and alternative food networks (Bloom and Hinrichs, 2011; Cleveland *et al.*, 2014; Ilbery and Maye, 2005; Klein and Michas, 2014; Milestad *et al*., 2010; Watts *et al*., 2005). Nevertheless, none of these writers have specified how their research tackled this alternative-conventional hybridity from an analytical standpoint. The sociology of market *agencements* offers some support to do just that: Allowing for the alternative-conventional hybridity consists in showing that alternative food networks are composed of a mixture of alternative and conventional "actants." This perspective offers a sound theoretical foundation to understand why alternative food networks behave both alternatively and conventionally.

The ways prices are set and value is shared in the fish AMAP are exemplary of this alternative-conventional hybridity. This market arrangement thus includes at its core a first, perfectly conventional, transaction, that is to say, one that is in line with the usual ways that fish "production" and selling operate along the Loire Valley's Atlantic seaboard. So, the fish is sold according to the usual devices and by the usual actors of the fish auction. The Yeu Marée cooperative buys the fish at the "market price" of the day, and then the catch's value is shared among the fishing boats' bosses and employees according to the rules in effect in the region's fishery sector. These conventional devices and actors are then hybridized in the fish AMAP with a series of alternative devices and actors, *i.e.*, devices and actors that strive to generate different ways of operating. Here we have in mind the rules written in the contracts drawn up between the fishermen and consumers, *i.e.*, subscriptions, lack of choice regarding the fish-box's contents, and setting a price for the fish-box that allows for production costs, but also the rule of sharing the EIG's profit margin equally among all the crewmembers. At the end of the day, ANT enables one to see clearly what is and is not alternative in an alternative food network. It draws one's gaze toward the engineering of "agencing" (Cochoy, 2014) that is done specifically for the purpose of generating alternativeness.

It is also on this basis that it seems possible, in our view, to make progress in understanding the phenomena of alternative food networks' "conventionalization". This is particularly useful for analyzing the situations in which alternative initiatives can grow commercially. This commercial growth has regularly been suspected of degrading an initiative's alternativeness (Nost, 2014). We believe that such a relation is empirically not unfounded, but must not be an analytical assumption: small is not always alternative and big is not always conventionalized (Rosin and Campbell, 2009). We propose making a clear distinction between market *agencements* that allow commercial growth and these market *agencements*' effects as regards conventionalization (Le Velly, 2015). That is what we did with the fish AMAP. The first stage in our reasoning strove to grasp the sociotechnical arrangement that enabled the association to sell 1500 fish boxes a month whereas the usual vegetable AMAPs sell no more than fifty or so boxes a week. We showed that this enhanced market capacity was linked to the combined actions of actors and devices making up a very different market *agencement* from that of vegetable AMAPs. Then, we studied this market *agencement*'s effects in light of two criteria of alternativeness that were important for its founders, namely, reconnecting producers and consumers and improving the fishermen's incomes. We saw that the fish AMAP achieved the second goal but not the first one, very specifically because of the

presence of intermediaries. Yet, the low degree of reconnection must not for all that be seen as an inevitable consequence of the large sales volumes. The addition of new devices, such as visits and newsletters, might be perfectly able to reinstate such ties in the future. At the end of the day, ANT effectively makes it possible to avoid before-the-fact explanations and deterministic reasoning and head towards analyzing the diversity and engineering of market *agencements*.

Acknowledgments

The authors thank the researchers who were partners in the Valpareso project, funded by the Pays de la Loire Region, especially Julien Noël and Laurent Legrel, who took part in the field survey; the *Journal of Rural Studies'* reviewers for their very relevant suggestions, and Gabrielle Leyden for the quality of her translation.

References

Araujo, L., Finch, J., Kjellberg, H., 2010. Reconnecting marketing to markets. Oxford University Press, Oxford.

Barrey, S., 2007. Struggling to be displayed at the point of purchase: the emergence of merchandising in French supermarkets, in: Muniesa, F., Millo, Y., Callon, M. (Eds.), Market devices. Blackwell, Oxford, pp. 92-108.

Bernard de Raymond, A., 2011. Arrangements for market intermediation and policies. Modernizing the fruit and vegetable market in France, 1950–1980. Sociologie du Travail 53 (Supplement 1), 19-37.

Bloom, J. D., Hinrichs, C. C., 2011. Informal and formal mechanisms of coordination in hybrid food value chains. Journal of Agriculture, Food Systems, and Community Development 1 (4), 143-156.

Buller, H., Roe, E., 2014. Modifying and commodifying farm animal welfare: The economisation of layer chickens. Journal of Rural Studies 33 141-149.

Busch, L., Juska, A., 1997. Beyond political economy: actor networks and the globalization of agriculture. Review of International Political Economy 4 (4), 688-708.

Çalışkan, K., Callon, M., 2010. Economization, part 2: a research programme for the study of markets. Economy and Society 39 (1), 1-32.

Callon, M., 2008. Economic Markets and the Rise of Interactive Agencements:From Prosthetic Agencies to Habilitated Agencies, in: Pinch, T., Swedberg, R. (Eds.), Living in a Material World: Economic Sociology Meets Science and Technology Studies. MIT Press, Cambridge MA, pp. 29-56.

Callon, M., 2009. Civilizing markets: Carbon trading between in vitro and in vivo experiments. Accounting, Organizations and Society 34 (3–4), 535-548.

Callon, M., Akrich, M., Dubuisson-Quellier, S., Grandclément, C., Hennion, A., Latour, B., Mallard, A., Méadel, C., Muniesa, F., Rabeharisoa, V., 2013. Sociologie des agencements marchands. Textes choisis. Presses des Mines, Paris.

Callon, M., Méadel, C., Rabeharisoa, V., 2002. The economy of qualities. Economy and Society 31 (2), 194-217.

Callon, M., Muniesa, F., 2005. Economic Markets as Calculative Collective Devices. Organization Studies 26 (8), 1229-1250.

Clarke, N., Cloke, P., Barnett, C., Malpass, A., 2008. The spaces and ethics of organic food. Journal of Rural Studies 24 (3), 219-230.

Cleveland, D. A., Müller, N. M., Tranovich, A. C., Mazaroli, D. N., Hinson, K., 2014. Local food hubs for alternative food systems: A case study from Santa Barbara County, California. Journal of rural studies 35 (1), 26-36.

Cochoy, F., 2004. Is the modern consumer a Buridan's donkey? Product packaging and consumer choice, in: Ekström, K.M., Brembeck, H. (Eds.), Elusive consumption. Berg, Oxford, pp. 205-227.

Cochoy, F., 2008. Calculation, qualculation, calqulation: shopping cart arithmetic, equipped cognition and the clustered consumer. Marketing theory 8 (1), 15-44.

Cochoy, F., 2014. A Theory of 'Agencing': On Michel Callon's Contribution to Organizational Knowledge and Practice, in: Adler, P., du Gay, P., Morgan, G., Reed, M. (Eds.), The Oxford Handbook of Sociology, Social Theory, and Organization Studies: Contemporary Currents. Oxford University Press, Oxford, pp. 106-124.

Cochoy, F., Dubuisson-Quellier, S., 2013. The Sociology of Market Work. Economic sociology the european electronic newsletter 15 (1), 4-11.

Dubuisson-Quellier, S., 2013. A Market Mediation Strategy: How Social Movements Seek to Change Firms' Practices by Promoting New Principles of Product Valuation. Organization Studies 34 (5-6), 683-703.

Dubuisson-Quellier, S., Lamine, C., 2008. Consumer involvement in fair trade and local food systems: delegation and empowerment regimes. GeoJournal 73 (1), 55-65.

Dubuisson-Quellier, S., Lamine, C., Le Velly, R., 2011. Citizenship and Consumption: Mobilisation in Alternative Food Systems in France. Sociologia Ruralis 51 (3), 304-323.

Dwiartama, A., Rosin, C., 2014. Exploring agency beyond humans: the compatibility of Actor-Network Theory (ANT) and resilience thinking. Ecology and Society 19 (3), 28.

Goodman, D., 1999. Agro-Food Studies in the 'Age of Ecology': Nature, Corporeality, Bio-Politics. Sociologia Ruralis 39 (1), 17-38.

Guthman, J., 2004. Agrarian dreams: The paradox of organic farming in California. University of California Press, Berkeley.

Hardie, I., MacKenzie, D., 2007. Assembling an economic actor: the agencement of a Hedge Fund. The Sociological Review 55 (1), 57-80.

Hennion, A., 2015. The Passion for Music: A Sociology of Mediation Ashgate, Farnham.

Hinrichs, C. C., 2000. Embeddedness and local food systems: notes on two types of direct agricultural market. Journal of Rural Studies 16 (3), 295-303.

Hinrichs, C. C., 2003. The practice and politics of food system localization. Journal of Rural Studies 19 (1), 33-45.

Ilbery, B., Maye, D., 2005. Alternative (shorter) food supply chains and specialist livestock products in the Scottish - English borders. Environment and planning A 37 (5), 823-844.

Jaffee, D., 2010. Fair Trade Standards, Corporate Participation, and Social Movement Responses in the United States. J Bus Ethics 92 (2), 267-285.

Jarosz, L., 2008. The city in the country: Growing alternative food networks in Metropolitan areas. Journal of Rural Studies 24 (3), 231-244.

Jones, O., 2006. Non-Human Rural Studies, in: Cloke, P., Marsden, T., Mooney, P. (Eds.), The Handbook of Rural Studies. Sage Publications, London, pp. 185-201.

Karpik, L., 1996. Dispositifs de confiance et engagements crédibles. Sociologie du Travail 38 (4), 527-550.

Karpik, L., 2000. Le Guide rouge Michelin. Sociologie du Travail 42 (3), 369-389.

Karpik, L., 2010. Valuing the unique: The economics of singularities. Princeton University Press, Princeton.

Kirwan, J., 2004. Alternative Strategies in the UK Agro-Food System: Interrogating the Alterity of Farmers' Markets. Sociologia Ruralis 44 (4), 395-415.

Kjellberg, H., 2007. The death of a salesman? Reconfiguring economic exchange in Swedish post-war food distribution, in: Muniesa, F., Millo, Y., Callon, M. (Eds.), Market devices. Blackwell, Oxford, pp. 65-91.

Klein, K., Michas, A., 2014. The Farm Fresh Healthcare Project: Analysis of a hybrid values-based supply chain. Journal of Agriculture, Food Systems, and Community Development 5 (1), 57-74.

Kneafsey, M., Holloway, L., Venn, L., Dowler, E., Cox, R., Tuomainen, H., 2008. Reconnecting Consumers, Producers and Food: Exploring Alternatives. Berg Publishers, Oxford.

Lamine, C., 2005. Settling Shared Uncertainties: Local Partnerships Between Producers and Consumers. Sociologia Ruralis 45 (4), 324-345.

Lamine, C., Renting, H., Rossi, A., Wiskerke, J. S. C., Brunori, G., 2012. Agri-Food systems and territorial development: innovations, new dynamics and changing governance mechanisms, in: Darnhofer, I., Gibbon, D., Dedieu, B. (Eds.), Farming Systems Research into the 21st Century: The New Dynamic. Springer Netherlands, pp. 229-256.

Latour, B., 2005. Reassembling the social : an introduction to actor-network-theory. Oxford University Press, Oxford.

Law, J., 1994. Organizing modernity. Blackwell Publisher, Oxford.

Le Velly, R., 2015. Fair trade and mainstreaming, in: Raynolds, L.T., Bennett, E.A. (Eds.), Handbook of research on fair trade. Edward Elgar, Cheltenham and Northampton, pp. 265-280.

Le Velly, R., Goulet, F., 2015. Revisiting the Importance of Detachment in the Dynamics of Competition. Journal of Cultural Economy 8 (6), 689-704.

Lockie, S., Kitto, S., 2000. Beyond the Farm Gate: Production-Consumption Networks and Agri-Food Research. Sociologia Ruralis 40 (1), 3-19.

Loconto, A., 2015. Assembling governance: the role of standards in the Tanzanian tea industry. Journal of Cleaner Production 107 64-73.

MacKenzie, D. A., Muniesa, F., Siu, L., 2007. Do economists make markets? On the performativity of economics. Princeton University Press, Princeton.

Mallard, A., 2012. Developing uses, qualifying goods: on the construction of market exchange for Internet access services. Consumption Markets & Culture 15 (2), 191-211.

Mansfield, B., 2003. Fish, factory trawlers, and imitation crab: the nature of quality in the seafood industry. Journal of rural studies 19 (1), 9-21.

McFall, L., 2009. Devices and Desires: How Useful Is the 'New' New Economic Sociology for Understanding Market Attachment? Sociology Compass 3 (2), 267-282.

McFall, L., Cochoy, F., Deville, J., 2015. Markets and the Arts of Attachment. Routledge, London.

Milestad, R., Bartel-Kratochvil, R., Leitner, H., Axmann, P., 2010. Being close: The quality of social relationships in a local organic cereal and bread network in Lower Austria. Journal of rural studies 26 (3), 228-240.

Morgan, K., Marsden, T., Murdoch, J., 2006. Worlds of Food: Place, Power, and Provenance in the Food Chain. Oxford University Press, Oxford.

Muniesa, F., Millo, Y., Callon, M., 2007. Market Devices. Blackwell Publishers, Oxford, p. 318.

Murdoch, J., 1998. The spaces of actor-network theory. Geoforum 29 (4), 357-374.

Murdoch, J., 2003. Co-constructing the countryside: hybrid networks and the extensive self, in: Cloke, P. (Ed.), Country visions. Pearson, London, pp. 263-282.

Murdoch, J., Marsden, T., Banks, J., 2000. Quality, Nature, and Embeddedness: Some Theoretical Considerations in the Context of the Food Sector. Economic Geography 76 (2), 107-125.

Nost, E., 2014. Scaling-up local foods: Commodity practice in community supported agriculture (CSA). Journal of Rural Studies 34 (1), 152-160.

Onyas, W. I., Ryan, A., 2015. Agencing markets: Actualizing ongoing market innovation. Industrial Marketing Management 44 (1), 13-21.

Raynolds, L. T., 2012. Fair Trade: Social regulation in global food markets. Journal of Rural Studies 28 (3), 276-287.

Reijonen, S., Tryggestad, K., 2012. The dynamic signification of product qualities: on the possibility of "greening" markets. Consumption Markets & Culture 15 (2), 213-234.

Rosin, C., Campbell, H., 2009. Beyond bifurcation: Examining the conventions of organic agriculture in New Zealand. Journal of Rural Studies 25 (1), 35-47.

Sonnino, R., Marsden, T., 2006. Beyond the divide: rethinking relationships between alternative and conventional food networks in Europe. Journal of Economic Geography 6 (2), 181-199.

Stassart, P., Whatmore, S. J., 2003. Metabolising risk: food scares and the un/re-making of Belgian beef. Environment and planning A 35 (3), 449-462.

Storper, M., Salais, R., 1997. Worlds of production: the action frameworks of the economy. Harvard University Press, Cambridge.

Trompette, P., 2007. Customer Channeling Arrangements in Market Organization: Competition Dynamics in the Funeral Business in France. Revue française de sociologie (English) 48 (5), 3-33.

Vinck, D., 1999. Les objets intermédiaires dans les réseaux de coopération scientifique. Contribution à la prise en compte des objets dans les dynamiques sociales. Revue française de sociologie 40 (2), 385-414.

Watts, D., Ilbery, B., Maye, D., 2005. Making reconnections in agro-food geography: alternative systems of food provision. Progress in Human Geography 29 (1), 22-40.

Weatherell, C., Tregear, A., Allinson, J., 2003. In search of the concerned consumer: UK public perceptions of food, farming and buying local. Journal of Rural Studies 19 (2), 233-244.

Whatmore, S., Thorne, L., 1997. Nourishing networks: alternative geographies of food, in: Goodman, D., Watts, M. (Eds.), Globalising Food: Agrarian questions and global restructuring. Routledge, New York, pp. 287-304.

MAP 1. Locations of the fish-box scheme's 17 distribution points in January 2015.

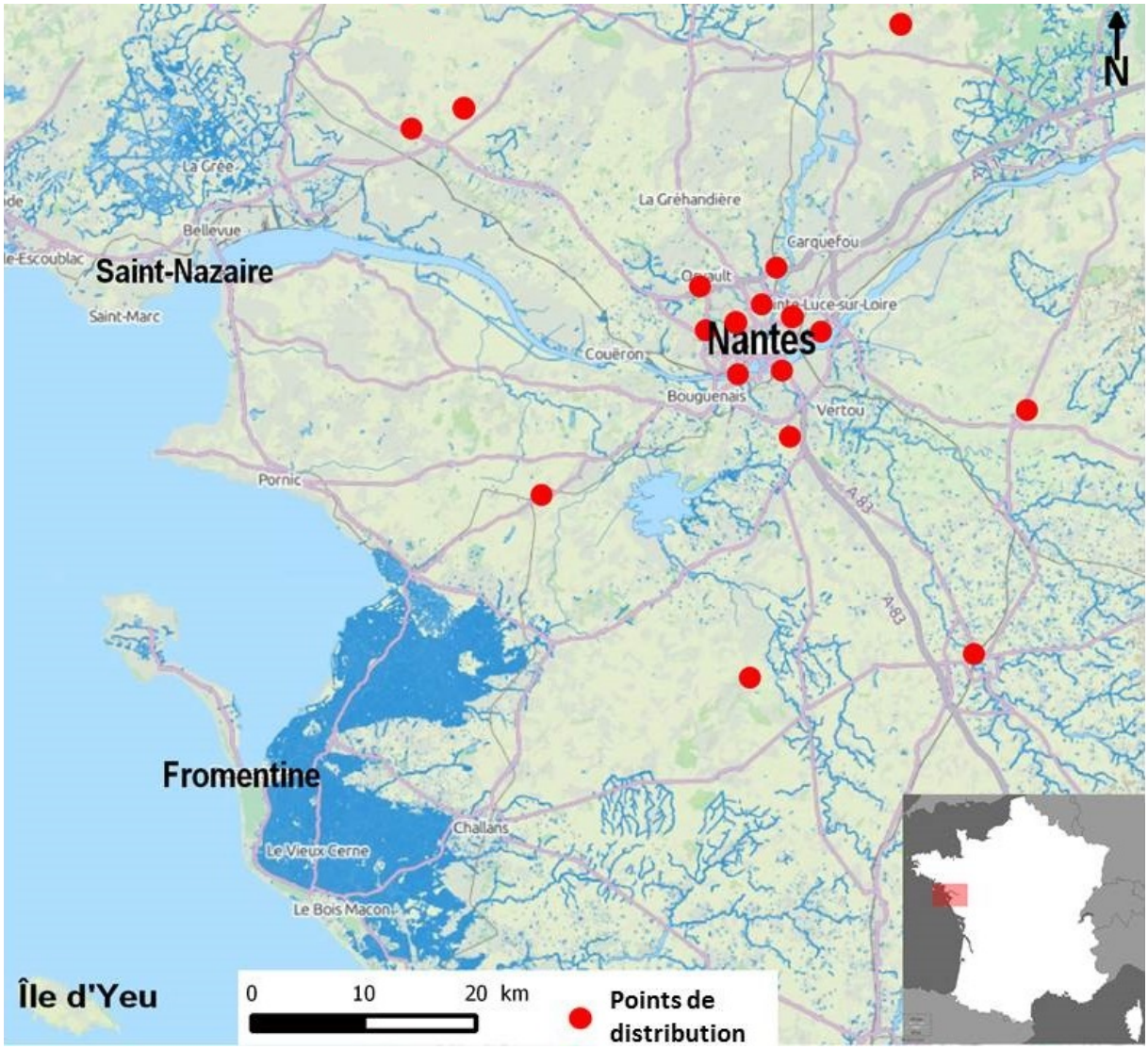

FIGURE 1. The fish-box scheme's financial and commodity flows