

The dilemmas for a sustainable food sector
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Sustainable development is regularly presented as a reconsideration of development, which has the role of directing the choices and actions of public and private sectors. As such, sustainable development is introduced as an intellectual and political response to the unsustainable consequences of current production and consumption methods. The fact that this concept is mainly based on stances by political players (international institutions and NGOs) of international scale, places this "concept" as a potential outline definition of public policies. Keeping a distance from current production and consumption methods, it has a critical approach which allows it to be reused by those defending issues concerning them, that are threatened by the development underway. Nevertheless, the concept of sustainable development is very flexible, allowing for multiple divergent and concomitant interpretations to the extent that it appears as an empty discourse, which does not have practical unequivocal and provable consequences. For it to become operational, the concept must be translated into formulations able to make action possible: this would consist in defining problems, projects and actors through the outline of frames that will serve as reference for both private and public sectors. An aspect of the sustainable development discussion, is precisely that of opening up the issue of consumption by handing control to the consumers that could play a role in reforming unsustainable production and consumption systems. Different policy frames shall be examined to arrive at the conclusion that it is impossible to reach a general, universal framework for a sustainable food sector.

Sustainable development

The concept of sustainable development inevitably implies some normative stances. The researcher can choose between two possible approaches. The neutral position limits itself to analyzing how the sustainable development discourse is used, its purposes and its effects. In fact, this "ethically neutral" approach leads to the consideration of the concept's flexibility and of its' diverging interpretations. The approach adopted here involves accepting some kind of normative position calling for regulations and taking the sustainable development requirements seriously. This normative position implies the specification of issues involved, which leads to emphasize issues concerning global resources (climate, biodiversity), the preservation of which is a matter of inter- an intra-generational equity. From this point of view, with respect to food and agriculture, four issues seem to prevail: energy and climate, biodiversity, food security and space equality, in other words territorial inequalities.

Sustainable agriculture

These four issues focus the discussion on agriculture looking at both sustainable agriculture (not destroying its own resources and preserving its ability to produce food) and at the role agriculture plays in sustainable development (not destroying other resources such as biodiversity or ensuring the viability of territories).

Sustainable agriculture involves a twofold requirement: ensuring the preservation of resources that support it (resource integrity) on the one hand, and maintaining its ability to use resources in order to

produce goods (functional integrity), on the other (Thompson). As per agriculture's contribution to sustainable development, this consists of a series of limits to development (defined as externalities by the economists) and of a series of requirements (in terms of production, contribution to food safety and territory's viability). These issues are at least partly controversial. Let us consider, for example, the need to increase the production of food, this encourages the expansion of cultivated areas to the detriment of natural areas considered to be reservoirs of biodiversity and of potential resources (Millenium Ecosystem Assessment, 2005).

However, normativity assumed by research can go two ways. The most common approach consists in developing criteria and indicators, which encourage researchers to take part in a vast standardisation programme in the name of sustainable development. In this way, researchers become sustainability theorists and engineers. This standardisation work is not completely incompatible with commercial expansion: even though at times it can appear to be a restraint for industrial and commercial actors, most often it expands their scope, as once regulations have been established, they are widespread and become "universal". The point made in this case is that there is no way to identify sustainable production / consumption systems that can be applied overall. Such difficulty makes it impossible to generalize the definition of criteria and indicators for sustainable agriculture: any definition implies customising the analysis according to specific areas.

Another approach consists in adopting the sustainable development normative orientation by carefully examining sustainable development policies with respect to the issues in question. It is a reflective position, which focuses on the ability to redirect and change socio-economic pathways on the one hand, and on criticising the consequences produced by a market-based standardisation process on the other. It examines how sustainable development ambitions can turn into policies and actions within the food sector.

"Référentiel" and framing

The concept of "référentiel" (frame of reference) was advanced by French political science in the eighties (Jobert et Muller, 1987) as a renewal of public political approaches. In general, this perspective concentrates on the fact that cognitive and normative elements play an important role in the way leaders understand and explain situations. Thus, it focuses on the critical function of the social construction of reality in defining what needs to be done. It is not insignificant that when this approach was first applied it concerned the analysis of French and European agricultural policy, which was characterised by what the main actors described as a "référentiel" (frame of reference) for modernisation that dates back to the fifties. As Surel (2000) affirms, similar theoretical evolutions took place in English-language sociology, with concepts such as paradigm or advocacy coalition. This last concept refers more explicitly to the activity of those attempting to assert their claims and demands. It also goes back to the concept of framing, which is usually employed in the study of social movements and of environmental movements in particular.

Building a "référentiel" (frame of reference) (or a public action framework) involves three linked processes. Firstly it consists of attributing a problem to some causes, then diagnostic and allocation stages follow, involving knowledge and beliefs simultaneously. From the framing perspective, this

often entails a normative reference to the concept of justice, especially when the actors involved regard themselves as actual or potential victims of a decision. Subsequently, there is the projection of the future or, at least, the definition of what needs to be satisfied. The latter not only requires normative choices but also algorithms reporting the expected sequence of actions and their consequences for the specification of strategies. Finally, the public action framework also defines the actual or potential identities of those enrolled or of the recipients. The "référentiel" (frame of reference) is therefore varied in nature and results from the translation between different worlds.

From the French sociological point of view, a "référentiel" (frame of reference) is not simply a discourse - but in fact a discourse - which would determine the general orientation of public action as the direction in which society should head. The discussion of Europe's modernisation was definitely introduced in the fifties. However, this generalised discussion - made plausible by a series of historical and ideological factors - can only really become active by transforming the discourse into legal regulations, techniques and tools that are likely to mobilise. Such transformation entails the specification of general principles applied to each sphere of operation. During this process, the general principle (Sabatier's deep core) differentiates itself according to as many rules and skills as there are spheres of operation, as these fields have their own action and mobilisation principles and their own organisational ways. This is what is meant by the term sectorial "référentiel" (frame of reference). The sectorial "référentiel" (frame of reference) therefore appears more as a form of compromise between a global "référentiel" (frame of reference) and the "interests" of components in a field of action. Sometimes public policies need to take these specific interests into account and to re-elaborate them so as to introduce the main actors into a new dynamic setting, moving towards a reference condition. The sectorial "référentiel" (frame of reference) is effective from the moment it operationally turns into "instruments" and regulations, aiming towards this reference situation.

As public policies progressively take shape - this is a process of mediation and negotiation between different sectors - some actors play a significant role as intermediaries, especially as agents capable of turning general demands into sector-specific demands. In particular, in the case of France, Jobert and Muller considered that the paradigm of politics in the sixties (deep core) was a paradigm of modernisation brought forward by the Government. In the agricultural sector, this "référentiel" (frame of reference) for modernisation corresponds to a compromise by the agriculture industry in respect of the concept of family farm. An arrangement that allows the simultaneous conciliation of the modernisation demand with the social and political features of the agricultural sector. The above involves a series of different types of organization, including professional organisations and instruments that make the modernisation of agriculture meaningful and operational. The paradigm described above therefore represents the frame of references in which debates and negotiations between the Government and the industry and agriculture sectors can take place: the framework defines the field of negotiation, the direction of the action plans as well as acceptable forms of organisations. The concepts of framing, "référentiel" (frame of reference) or of paradigm (each concept focuses on one particular aspect) point out a space articulated by beliefs, knowledge and rules in which tensions can be managed. Based on this, it is possible to deal with conflicts taking place within social fields created by the sectorial "référentiel". However, as pointed out by Surel (2000), this approach tends to underestimate the role of interests in the elaboration of paradigms for public

policies. It is therefore important to distinguish between conflicts within frameworks defined by a "référentiel" (frame of reference) on the one hand, and, on the other, conflicts concerning frames themselves, which are revealed when paradigms are changed.

Sustainable development: a "référentiel" (frame of reference) ?

The paradigm, which has become dominant in formulating public policies is often identified with liberalisation, which we would rather name as market competition. It is within this context that rules and limitations are introduced. These are gradually defined for public intervention on agricultural markets, which, because of ¹ the process itself, are becoming globalised. Nevertheless, this example of public action must face regulatory issues arising from anomalies that stem from the market extension process itself. In this manner, food safety seems an issue that can be tackled through public action (reinforcement of controls, traceability) but also through the elaboration of rules that fall within the liberal paradigm by letting economic players elaborate for themselves these regulations and the monitoring systems that accompany them. The power of the "référentiel" (frame of reference) consists in its ability to integrate the anomalies in its own strategy and to shape the cognitive and normative tools in order to answer to the criticisms caused by these anomalies. This power does not only arise from the fact that the "référentiel" (frame of reference) is a legitimate reference, it is actually also caused by power and information asymmetries between the main actors and particularly by the actors' unequal ability to mobilise specialised resources.

Sustainable development presents itself as a "référentiel" (frame of reference) for public policy. It operates on an international scale confronting environmental and developmental issues. The former is mostly a concern for the North, a worry which the countries in the south respond to with a demand for development. Its relationship with the commercial competition "référentiel" (frame of reference) is very ambiguous as it can be interpreted in contradictory ways depending on two concerns:

- with respect to environmental issues, sustainable development can represent a critical position as it calls into question the multiple failures by the market when taking into consideration environmental "goods", while, at the same time, it can be seen as a need for new technical progress and for increased rationalisation of resource use: all changes that require the market to be regulated so that they can produce their effects.

- in respect of delays in the development of the South, sustainable development certainly requires that Southern resources are protected (the environment being an aspect of development) while also requesting that Southern countries are able to access the markets and technologies of the North.

Firstly, the ambiguity of the sustainable development concept remains with regards to the dominant "référentiel". There are two possible approaches: either sustainable development is considered as a substitute "référentiel" (frame of reference) and is presumed to take the place of market competition as a general framework for public action, or it is seen as an additional criteria, as a corrective principle of liberalisation. According to this second point of view, sustainable development simply consists in

¹ Such intervention is both in favour of the markets' expansion and of standardising the organization of these markets. The Standard, to reiterate, also acts as a factor in favour of this market expansion.

informing the market more extensively. Unsustainability is mainly attributed to information asymmetries concerning externalities and public goods. Therefore, the difference lies in the underlying attribution process. In this second approach, a stabilised market can integrate the requirements of sustainable development. And this is, I believe, the dominant view today.

The fact that sustainable development is so ambiguous prevents us from treating it as paradigm of public action. The question of its meaning can be shifted so that this normative paradigm² is transformed in actual regulations and instruments, which have to be established to make it operational. The "référentiel" in fact, consists of regulations as well as knowledge, techniques, and, to put it briefly, of instrumentation that gives it its real meaning. There is not so much debate on the meaning of the sustainable development model as there is on ways of interpreting it and of linking it to other frames of reference such as liberalisation, both as an opponent and as an ally of a more rational liberalisation process.

In the "référentiel" model, the key process consists in transforming the global "référentiel" (into various sectorial frames, which are customised to the specific requirements of various socio-economic sectors (agriculture, industry, education, etc.)). The paradigm of agricultural modernisation in Europe owes its power both to its transformation into technical and organisational tools and to its possible convergence with other demands for public action such as, for example, the concern over self-sufficiency, the will for political integration and the consideration of discrepancies in the level of regional development. The creation of a sectorial "référentiel" presumed ensuring the consistency of these different projects and communicating with the farming world of that period. It is a crucial question. But sustainable development, at least in its strong interpretation, rejects precisely the sectorial approach and instead affirms that this differentiation into sectors is a factor contributing to the environmental and the developmental crisis. On the contrary, there are many political initiatives that see sustainability within sectors, which are more or less narrow. For example, it is from a very sectorial perspective (production - energy consumption) that agrofuels can be considered as a sustainable strategy.

The flexibility of the sustainable development concept is especially due to the fact that it can be applied to extremely different economic and social practices and that the delimitation of what is included and excluded is crucial for the meaning and consequences of its implementation. The more the scope of the concept is narrowed down to a specific socio-economic sector, due to the limited number of variables taken into account, the more chances there are to reach an operational definition. However, at the same time, there is more disregard for a whole series of phenomena and effects on other spheres of operation. The climate challenge requires a transversal action involving different sectors and the same applies for biodiversity protection issues.

However, it is possible to take this ambition seriously if, on the one side, we define what is required to be sustainable and on the other we provide the concept with the cognitive and normative tools that allow the main actors to make choices in limited spheres of operation. In a standard

² Sustainable development is mostly defined as normative (conservation, equality) and what it lacks the most is cognitive content, in other words the attribution of effects to causes, which allows the definition of choices and options between which it is possible to negotiate.

economic specification, sustainability is defined by the preservation over time and space of goods necessary for the satisfaction of human needs. The issue of sustainable food therefore presents a twofold problem: on the one side that of maintaining goods necessary for food production and all related human and technical resources necessary for this purpose, and on the other that of preserving all "public" goods, which existence can be threatened or affected by food production itself, especially natural goods such as energy or goods provided thanks to certain biodiversity conditions.

The issue of sustainability applied to agricultural and food sectors leads to the analysis of the framework in which it will be evaluated. In fact, it is on the basis of this evaluation that policies and operations are determined. Following this contribution, we shall deal with the issue of framing and of the potential role of consumption.

This is quite an unusual situation from the theoretical point of view. The debate focuses both on the way a sustainable "référentiel" (frame of reference) can be related to the dominant "référentiel" (frame of reference) of liberalisation and on the way sustainability can be transformed within different socio-economic fields without losing track of its global and transversal ambition.

This calls the attention on what we previously defined as framework conflicts namely competition, which is now involved in the way evaluation frameworks are defined.

The emergence of the consumer...

One of the main changes in the agro-food systems consists in the shift that has occurred in the value chains. While for many decades the main valorisation activity (in other words the creation of economic values) consisted in modernising production systems and rationalising them based on an industrial model, it seems clear that today valorisation shifted downstream, towards the commercialisation of agricultural products. This hypothesis is based on the idea that an economic sector provides separate services depending on the creation of value made possible by each one of them independently. The shift mentioned above allows understanding the important role of product differentiation, the introduction of products on the market, it also brings forward the hypothesis that public action is moving away from primary production (traditionally at the centre of European traditional policies) and towards other sectors such as food safety, different product qualifications, etc...

So this shift implies that all actors pay greater attention to consumers who have also become an important challenge, even more so than producers. Consumers are now taken into consideration in a different way with respect to many issues such as the quality of products. Food crises brought to light the importance of opinions within the dynamics of agro-food markets. This can also be said with debates on health, nutrition claims, on the acceptability of GMO or even on the quality of products of designated origin³. Crises simultaneously reveal and perform changes as they have the means to propose effective answers, which are plausible and operational, taking precedence over traditional public policy actors.

³ The development of agrofuels represents another manifestation of this shift, where new products seem to define the content and purposes of agricultural production.

It is therefore possible to make the hypothesis that today agro-food policies are more and more directed by consumer mobilisation and that the key to success lies in the ability to capture and shape consumer demand. So it is not surprising that agricultural issues now include consumers and consumption trends.

Consequently, from an economic perspective, the main difficulty lies in the ability to create a series of points of reference and guides in order to capture the consumer's attention. On the other hand, there will be a certain lack of interest in production systems, also with respect to scientific and technical research.

From a political point of view, it is therefore possible to make the hypothesis that policies on production and (from now on) consumption would mostly focus on the provision of normative frameworks where consumption plays a central role and consequently concentrate on consumer purposes. This way, today policies and regulations aimed at food safety and, consequently, at market stability, constitute a very active field of operation and impose strong restraints on actors operating in the agricultural and food sectors.

In the research area the concept of food systems, which now includes consumers in the analysis, may represent another effect of this shift, even though there are also other causes.

Potential frames

The current situation is that of competition between different frameworks for sustainable food and agriculture. Various civic and scientific players advanced criticisms over consumption and production methods.

Food miles

The recent debate on food miles derives from an approach that proceeds this way insofar as environmental impact assessment. However, the criterion used here is strictly related to the link between energy consumption and transport. The negative reference picture is that of air transported products from their regions of origin to areas of consumption. Green beans travel for fifteen hours from Kenya before arriving in European supermarkets. This approach, put forward by environmental activists, has the advantage of expanding evaluation including distribution system costs.

Nevertheless, a number of counter examples has been highlighted. This is the case of fruit juices (Courrier de l'Environnement, 2007), in which it appears that the energy costs of production are more linked to the economy of scales of processing units than to transport related costs. Moreover, this study shows that energy consumption could ultimately be strongly conditioned by journeys made at the final stages of the product distribution process, namely the journeys carried out by final consumers.

In the same perspective, some researchers (Saunders and al, 2006) from New Zealand strongly criticised the "food miles" viewpoint by systematically comparing a series of food products from New Zealand to their equivalents in Great Britain, from the outlook of total energy consumption. In almost

every case, production processes in New Zealand with the inclusion of shipping, are more energy economic compared to similar productions in Britain. On an environmental level, this comparison could be even more favourable to NZ products considered that lower energy costs are mostly related to the lower use of industrial food for cattle, of fertiliser and pesticides for plant productions. If this type of comparison is expanded to include other environmental aspects, the environmental benefits of NZ products would undoubtedly rise.

The results of the "food miles" debate are paradoxical. On the one side they highlight the costs of transport and therefore the energetic impact of food globalisation and on the other they question food localism ruthlessly.

Another criticism was put forward by fair trade activists and by leaders of the South: highlighting the energy costs of transport would lead to limit product imports in the North, which are currently a source of income for Southern countries and their people. This is a more politically oriented criticism, which disputes the hidden protectionism of Northern countries.

Both these examples were chosen to illustrate two issues. Firstly, that an environmental impact assessment requires an integrated analysis of the impacts and not resorting to one or two isolated indicators, even if these can be mobilised in public debate. From this point of view, activism seen as a form of consumer involvement tends to focus this evaluation on critical points but rarely produces an integrated assessment. On the other hand, the assessment of impacts must not be confused with the assessment of sustainability. In terms of sustainable development, the approach cannot limit itself to comparing accounts resulting from impacts in production / distribution systems. The production system in New Zealand may cause less pollution, however, this does not imply that it is not harmful to the environment, nor that replacing local British productions with it would represent a sustainable solution.

Ecological footprint

The concept of ecological footprint was specifically introduced as a way of integrating different aspects of assessment under a single index. However, this also refers to energy consumption in terms of greenhouse effect. It is a simple concept of extensive content: it reports the quantity of energy and materials required by a certain economy and converts them into the surface/water nature needs to withstand these operations. In other words, it defines the land and water surface required to sustain human population indefinitely and given standards of living for an unlimited period of time. (Wackernagel and Rees, 1999). What is presented as an assessment methodology that could become universal and could be communicated to consumers by calculating the ecological footprint of a product, is based on weak hypothesis. The point that interests us the most is that the ecological footprint index suffers from two major deficiencies with respect to food and agriculture sectors.

On one hand, the ecological footprint refers to biocapacity, which corresponds to the average land productivity. Therefore, it logically follows that the increase of lands' biological productivity involves a definite benefit, which consists in narrowing the gap between the footprint and the available resources. In other words, increasing the biological productivity of agricultural lands ultimately offers

the same convenience as reducing intermediary consumption. On the other hand, the calculation method used to establish the ecological footprint, by evaluating energy and matter flows, significantly neglects emissions (waste, accumulation of pollutants) as well as (and especially) systemic effects (to explore).

These indexes have some points in common. Of course, they all attempt to become entry points for consumers and intend to influence consumer behaviour by giving people the means to make choices. However, the will to become reference points is based on two hypotheses: on one side that it is possible to establish a universal way to measure the impact of consumption (through a measuring instrument) and on the other that this measurement is based on the science of impacts. This is therefore a positivist perspective of sustainable development and a universalist one which, ultimately, looks at the market as a changing mechanism. In this sense, the "food miles" and the "ecological footprint" approaches represent mechanisms legitimising the liberal vision, provided that the market is corrected thanks to better information. Fair trade is also confronted with the commercial competition model, which would represent the means to achieve the quantitative expansion required for it to become a force of change.

Fair Trade

Fair trade falls in line with the proactive frame of action against this sectorial strategy and, in terms of fairness, claims the need of exchanges between the North and the South. Moreover, one of these claims concerns the access of agricultural productions from the South to Northern markets. Even though African agricultural policies of recent years privileged regional agreements based on the model of European Agricultural Policy, it appears that rather than supporting the latter, they favoured their launch on foreign markets in order to bring different currencies into their countries with the purpose of fuelling the development process. The underlying paradigm is not very clear: is it that of commercial competition, in which case fair trade acts as a regulating and integrating mechanism allowing the entry into international markets? In this case, the definition of rules and seals of approval can enable the gradual entry into the trade. On the other hand, because of the damages it causes, this integration into the international market is precisely what concerns fair trade activists who are attempting to establish fair trade systems between producers from the South and Northern consumers.

So what happened to the original paradigm? Fair trade firstly comes with regulatory choices (privileging small producers, unions of producers, etc.) and forms of trade organization (pre-financing, short supply chain, etc.), which are turned into messages for consumers so that they can establish a connection with producers. Therefore, the emphasis is on trade conditions and on the maintenance or improvement of producers' organisations. In this case, trade involves communities twice as much. In fact, it is involved in producers' organisations, consumers' organisations, which are more abstract, and in organisations between producers and consumers. What is at stake, therefore, is a moral framework that regulates trade and entails building⁴ and sustaining these communities in the South as much as in the North. The norm is mainly procedural as it requires the implementation of certain rules on trade

⁴ In this sense, we would like to point out the need to establish collective appropriation rules in southern communities through the application of the principle of redistribution, which partly focuses on collective services.

development. Sometimes it entails regaining the autonomy of local communities, or it offers opportunities to do so. In that case, it shows the reverse image of the exchange privilege putting forward the possibility of independent or autonomous agro-food organisations.

Debates on its conventionalisation show clearly that fair trade is tempted by a way of generalisation. If such generalisation, however, does not result from the conventional market, it would require another "référentiel" (frame of reference) capable of resolving all the issues of competition that it entails.

Maybe the question is less about the integration of fair trade in the channels of mass distribution and more about regulations to be introduced in these channels. This conventionalisation involves, in fact, a homogenization of rules and their simplification into verifiable and controllable resources. The homogenization of rules eliminates any opportunity for detailing negotiations and for customising them to local contexts. Conventionalisation also tends to set short time limits breaking away from long term commitments. Now, fairness implies taking into account the specific realities of social relationships in the same way as keeping in mind the environment (Charlier et al. 2006): it is impossible to determine the same rules for Indian cotton producers involved in patronage relations with local businesses, and Andean craftsmen. In other words, fairness would necessarily be placed in spatio-temporal contexts that are not compatible with those of the market: the fairness sought cannot be subject to generalisation. Fair trade will point out several procedural approaches and more than one approach for gradual development and will not suffer being judged passively and consistently.

Localised food systems

Localised food systems, as with fair trade, cannot be primarily defined by an objectivist criticism of conventional systems. Instead, they mostly rely on subjective criticism, which combines various categories of concepts: these partly include the moral criticism of the unfairness experienced by farmers, a criticism of the impersonality of market relations and a criticism on quality, which could either be health related or hedonistic (slow food). Among these, in different proportions, we come across the different dimensions Kloppenburg and al (2000) uncovered from the qualities of alternative food systems: a relational dimension (proximity, mutual knowledge), a moral dimension (justice, civic duty, directed by values), a cultural dimension and an ecological dimension. If such diversity is able to show the social and cultural multiplicity of alternative food systems, can it also link these operations to sustainability as these individuals make us to believe?

It is understandable that initiatives attempting to relocate agro-food systems simply reiterate the "food miles" criticism or that concerning the ecological footprint, as proximity and economy energy are spontaneously associated. Hinrichs (2003) already pointed that out. However, we have noticed that this convergence is far from being obvious when analyzing the facts. On the one hand, the link with fair trade could also be made if terms negotiated between producers and consumers are accompanied by a concern over fairness which, for example, translates into consumers medium term commitments or into pre-financing practices for production. At the same time, however, there could be discrepancies between the interest in supporting development in the south and the intention of relocating agro-food systems in the North.

These relocation practices fall in line with a widespread movement involving critical consumption (Cohen, 2005), which also affects other sectors as well as the food sector. However, the above practices, which entail as many strategies for the promotion of different lifestyles as there are political market criticisms, do not constitute a movement able to define a clear and univocal identity for its participants nor a definite political direction.

More importantly, its local nature can be questioned on several points. Many critics (Goodman, 2003) underlined the risks of mythifying what is local, of reifying the local. This would conceal the way the local area is structured both internally (social relations that are not necessarily democratic) and externally (connections with other economic or political scales). From our perspective, the key issue is that defining a resource as "local" entails the establishment of boundaries *and* determining ways of overcoming them, deciding what is included and what is excluded from them (or externalised). The promotion of a local product (of AOC - Registered Designation of Origin) can be efficiently adapted to a wide marketing network and its prices could be driven higher within a market niche. Every localisation process is selective and, in some ways, can be integrated in exchange networks. Ultimately, the "local" sustainability of a production network cannot be generalised as a model for all types of production. Consequently, the very use of the expression "local food systems" is unreliable and it would be wiser to refer to localisation processes instead, as they deal with different aspects each time.

Above we considered *four examples* of different approaches used by activists in the attempt to reshape food consumption practices. These are more critical definitions rather than political plans and they all target consumers. The first two clearly refer to ecological issues of sustainability, in other words, the preservation of resources on a global scale. They share a global approach, in that they propose general criteria for the assessment of food systems, starting from the objectification of their consequences. They provide very specialised content, as, for example, the calculation of the ecological footprint entails the processing of a large number of data, which is extremely complex. Finally, they both deal with the market as a routine process on condition that it is well informed. This is the purpose of campaigns that aim to mobilise consumers and influence their choices.

Fair trade and local systems both establish themselves on the basis of other principles such as that of moral economy, which is supported by the polysemic criticisms of different forms of consumption and of relations between producers and consumers. In this case, the framework is more particular as it relies on practical and specific actions concerning relations between consumers and producers. The impacts of such systems are hardly objectified as their assessment is implicitly considered as endogenous as it relates to the evaluation carried out by players who are experts in their field. As per the market, it is not a question of information but mostly of creation by establishing close relations (either geographically or organisationally) which would turn into interactions based on negotiation between partners within exchange regimes heading towards increased social justice.

Table. Two framework approaches⁵

⁵ This comparison can be extended to other types of framework: biological agriculture can also be responsible for ecological matters. However, this is often done locally on the basis of general rules in the attempt of creating a specific market. Corporate social responsibility regulations (CSR) still point in a different direction.

	Ecological frameworks (food miles, ecological footprint)	Social frameworks (fair trade, community supported agriculture, AMAP, slow food)
Evaluation criteria	Universal nature of global ecological issues Intergenerational justice	Specificity of social situations Intragenerational justice
System evaluation method	Evaluation's objectivity	Subjectivity
Impact evaluation method	Specialisation	Endogenous
Market relation	Market information	Market creation
Action framework	The consumer makes certain choices	The consumer as a system's developer
Regulations	Prescription	Negotiation

These two types of framework refer to very different systemic constructions. This is revealing: what we define as "food systems" in reality is only a constructed system. Whether these are interpreted from the point of view of producers (production systems) or from that of consumers (diet, consumption models), food systems always remain heterogeneous and open (especially when they include imports and exports). Any framework or "référentiel" should mostly be seen as the creation of a cognitive and normative framework, which has the objective of structuring a system, of providing it with a "référentiel". This always in counterpart implies neglect of part of the links between components and factors that are rejected outside. From that perspective, the market competition frame is a systemic construction which has the benefit of creating a general system of equivalence and circulation at the price of reducing the number of elements taken into consideration. Any effort to generality, which expands the field of the system in question, is usually paid with some form of loss. The issue of sustainable development is therefore reformulated within relevant framework areas.

The impossibility of defining a framework: indecidability of sustainable food systems

The argument supported below is that it is impossible to establish a generalised exclusive framework for agro-food systems. *Generally*, the indecidable nature of agro-food systems' sustainability is based on four main reasons.

1. This firstly concerns public goods. Climate change and biodiversity represent two major issues, but they are not "resources" that can be dealt with on the basis of the standard economy paradigm. First they are general conditions, resulting from social and biophysical phenomena, which are typical

of our societies: they allow the definition of systems able to make economic resources available immediately or in due course. However, both cases are slightly different. On the one hand, if by biodiversity we intend that related to ecosystems, this also includes a certain number of goods that can be accessed as resources, whilst climate is strictly more of a context (or an emerging asset class), which affects the conditions of production of a certain number of goods.

In the case of climate, as three conditions were met, it was possible to reach the beginnings of a norm (Godard, 2004): on one side it was possible to establish an equivalence relation between different factors of climate change (different greenhouse gases), on the other, emissions are considered equivalent (from the point of view of their effects) independently of the location where they are generated. Finally, we were able to conventionally establish a universal instrument of measurement and exchange (the carbon-ton). In due course, this led to the creation of a world market based on reducing emissions. Devices for the adjustment of economic and technical asymmetries were subsequently added⁶. This regulating model does not allow the equal distribution of energy resources (that is ethically justified but economically impossible), but has the great advantage of providing a mechanism that moves in a more sustainable direction with regards to energy consumption, provided that the authorities (international negotiations) can impose reduction objectives. As per the food sector, the provision of specific regulations does not seem necessary: the transport of food products and choices relating to localisation will gradually change in function of the rise in energy costs. With regards to the agricultural and food sectors, the main task consists in adapting production and consumption systems to the energy market, which is also subject to rising prices. The "food miles" issue therefore becomes superfluous.

As per biodiversity, the situation is completely different. There is no possible evaluation system which compares the planet's different ecosystems. In fact, it is not possible to evaluate the different goods and functions of ecosystems that range from tropical forests, temperate areas or dry areas such as Sahel by using the same scaling parameter. As it is also not possible to put the "pressures" exerted on these ecosystems on the same level, as their ability of absorbing pollution varies greatly. If the "climate system" can be considered as a system, the various functional systems constituting biodiversity do not form a unique whole, on the contrary, they make up a mosaic of multiple and localised systems, which characterize these territories. Their entanglement uncovers the idea of global biodiversity but does not constitute a unified entity. It is therefore impossible to create a universal equivalent of different biodiversities. Subsequently, the relation between biodiversity and agro-food production is a connection that must be conceived and dealt with in different ways depending on the ecosystems envisaged and consequently on their territories. Agricultural water consumption, for example, cannot be seen in a global way as the water resource and the functions linked to it vary greatly depending on the areas. So it is not possible to designate a general model or a market model that would be reasonable for this context.

For that reason, the most appropriate agricultural techniques for the protection and smooth operation of ecosystems can be found by analyzing the specific requirements of each region.

⁶ Moreover, the imposition of corrective mechanisms is only possible if the general equivalent is available.

Moreover, the acknowledgement of public goods as components of ecological systems (included in agricultural frameworks), is based on a variety of processes that steer away from any kind of generalisation. Even though economists attempt to assign an economic value to biodiversity (therefore trying to apply a universal evaluation criteria), clearly, we are aware that this consideration is the result of cultural and political processes and of preferential accounting processes. For example, the way in which inhabitants perceive a scenery could be a strong support for the protection of a type of agriculture, which because of the techniques employed, can guarantee the sustainability of the area. This particularly applies to those consumers who, in this case, are inhabitants or local citizens.

Localisation and scales of evaluation

The area for the evaluation of sustainability is therefore necessarily both local and global and sustainability is defined in the way that reference areas can be articulated.

Each agro-food system is composite. Whether it is considered from a consumers' point of view or from a resources' point of view (land, water, soils), different aspects of reality will be uncovered. In fact, each point of view corresponds to what Latour defines as a "collective". From a cognitive perspective, this corresponds to specialised frameworks of knowledge capable of establishing connections. From a political perspective it corresponds spokesmen, which are more or less structured and defined. Each region is conceived in a different way as it relates to a specific sector, which could range from consumption, health to specific ecosystem. Each region is therefore relational and assigns certain attributes to a place, which is made to meet requirements leading us to think of other areas and other scales.

Any agro-food system (either of a village in Nigeria or of a modern city for example) consequently involves underlying negotiations, which privilege certain functions and keep others concealed or carry them over to other areas. There is no universal and general framework able to qualify these systems. For example, the choice to develop off-land livestock farming near cities is a sensible option as the costs of transporting cattle are far higher than those involved in the transport of food, especially if preserving natural areas is considered as important ⁷ (MEA, 2003, p 752).

The historic nature of agro-food systems.

Finally, agro-food systems are deeply rooted in history. Their current features are the result of past choices and of rejecting other possible itineraries. If apples that are currently produced in Belgium involve high ecological costs, which makes import a reasonable alternative, it is also because decades of varietal selection led to the employment of technical practices, which are difficult to revert from (lock-in technology). Evaluations are always incidental and can only lead to limited generalisations. From this perspective, consumption habits form an integral part of historical nature as they go back to explore cultural dimensions and the corporeal internalisation of food systems.

⁷ Contrarily to the IPCC and even though established along the same lines, the Millenium Ecosystem Assessment chooses strategies that are regulated locally. This choice can be considered partly political (Miller, 2007), but it is also a cognitive choice resulting from the heterogeneity of biodiversity and from the uncertain and unmeasurable nature of the resources in question.

This historical dimension of food systems leads us to think that it mainly involves a process that needs to be oriented in a certain direction. And as per the role of consumers, this involves the capacity of collective actions to guide the evolution of agro-food systems.

Conclusions

The concept of food system is partly deceiving as it leads to the belief that it can be defined from definite unities of component relations. Agro-food systems are heterogeneous, open and historically defined. They would be better described in terms of flow, transforming machines and relational areas. From this point of view, frames appear as cognitive and regulatory tools that break down wholes present within the entanglement of reality in order to reorganize them in quasi-systems and to structure production and consumption exchanges and practices. These framing operations are essential for action and administration purposes but they come with effects such as omission, choices and are dominated by the privilege they assign to certain factors and aspects.

The strength of the market framework lies precisely in its ability to generalize and create wide fields of exchange at the cost of ignorance concerning social and ecological dimensions, which cannot be subject to comparable counter-generalisations. The fact is that the agro-food sector is indexed according to ecological and social singularities and forms part of a specific history.

Sustainable development cannot represent a counter reference to the dominant reference of market competition, as it cannot be translated into instruments for assessment and mobilisation, which are sufficiently generalised. Therefore it cannot constitute a resource or a procedure used to build tangible frames of reference, which are intended for food consumption and production in regional systems. As a result of this, sustainable development has a reflective function on a cognitive level and it can only be procedural in regulatory terms.

However, it is crucial to make a distinction between territorial frames and locally focused frameworks. Territory, in this sense, indicates a place where different collectives can relate to each other, bringing forward different aspects of sustainability, reference areas, on different scales. Therefore, the role of sociology consists in critically observing the dynamics resulting from these structures through collective fields of action, which cannot go without politicizing the food sector but whose forms of politicization remain undefined and uncertain.

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