

## ***Agriculture, Food and Design: New Food Networks for a Distributed Economy***

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### **Abstract**

*Although agriculture and food production are pushed towards traditional industrial models, this article will describe a stratified reality where different behaviors, agricultural ethos and food cultures exist side by side. In particular, it describes five different sub-systems: the traditional system, the classic, experiential and advanced agro-business systems and, finally, social experimentation. In this general framework the paper introduces the role that design can, or could, play and criticizes the current notion of food design: a design activity aiming to transform food and food preparation into a kind of show, into a sensory theatre where everything has to be thrilling and exceptional. This article highlights the need for a design culture capable of raising more profound questions about the sensory nature of the food and food preparation experience. By way of a concrete example of where this reflection could lead, the Slow Food organization is offered as an excellent instance of strategic design in the agriculture and food system. The article also considers the opportunity for designers to look at new food networks built by creative communities all over the world. The article concludes by outlining how designers can enhance these new forms of organization, bringing their specific skills into play to improve visibility, make communication channels more fluid and implement enabling platforms that encourage the spread and development of new and promising food-networks.*

### **Introduction**

Agriculture is very special production activity. And food is a very special product. Pushing agriculture and food towards traditional industrial models has led to an agro-food system that, as a whole, is not only totally unsustain-

able in the long run, but also holds negative implications in the short term.

Fortunately, the agro-food system has not been entirely shaped in this disastrous way. Observing it more attentively, we can detect different sub-systems in which various organizational models have been adopted and different values are generated. Of great interest among these is the emerging sub-system in which new kinds of relationships between farms and consumers are defined and tested.

This article presents the relationships between these alternative agricultural/food sub-systems and different kinds of design activities. In particular, it focuses on the (possible) design role in enhancing *new food networks* and promoting them as seeds of a *sustainable multi-local society*.

### Food and design

The history of design is traditionally linked to the history of industry. Up to now its role in agriculture has been minimal as is also the case in food, or rather gastronomy. It has always been said that agriculture and gastronomy are a world apart from industry and so, almost by definition, a world apart from design.

Nowadays, however, there is more and more talk of a possible meeting between design and the food system. The expression, 'food design', has become something of a buzz word (though as of yet its meaning is far from clear). All this may seem to prove beyond doubt that agriculture is now industrialized and that food has become, to all intents and purposes, an industrial product like any other (Meroni, 2003; 2004).

Following this line of reasoning, design could be seen as yet another agent driving us towards a full industrialization of this field of human activity. This is a legitimate way of thinking supported by numerous examples, but does it really have to be like this? Is industrialization as presented so far really the only feasible proposition and all that can be seen on the design horizon? The reply we are suggesting here is 'no', and for various reasons.

It is true that design was born with industrial society and carries deep within itself the concepts, value systems and ways of doing things characteristic of the early stages of industrial development. However, industrial society has

changed and continues to change, rapidly. Industry itself has changed and design with it, or even before it, being in itself one of the drivers of industrial change. It follows that if design can and must have a role in agricultural cultivation and food production, this should arise now out of a profound awareness of the crisis in the dominant economic and cultural model, and out of a recognition of the possible role of design as co-promoter of alternative agricultural and food systems that can become promise real steps in the direction of sustainability.

This does not mean that design must deny its nature of industrial actor (i.e. of being one of the main drivers in the industrial culture definition). It means that it can and must collaborate to redefine the very concept of industry itself. Especially, so far as we are concerned here, it means collaborating in the consolidation of an agriculture, food industry and distribution system capable of moving in the opposite direction to what has been the prevailing trend until now.

### Beauty and agriculture

'That's a beautiful olive grove'. That's what they still often say in Tuscany, where I live, when they want to speak well of an olive grove. Beauty is still considered by many to be the most concise way of expressing the quality a field should have - a beauty that obviously also includes its productivity, but does not stop there. A beautiful olive grove must be productive but it must also be looked after just like, or even more than, a garden.

A beautiful olive grove is the result of a diverse range of activities ranging from pruning and caring for the trees themselves, to tending the meadowland around them, to the constant clearance of the irrigation canals and the upkeep of the dry stone walls that hold the terraced hillside. The frequency with which these different activities are repeated varies from annual tasks, like pruning, to lifelong labor that will effect generations to come, as in the maintenance of dry stone walls.

A beautiful olive grove marries individual interest and collective advantage. The cultivator does something for himself, but he also carries out a fundamental social task in managing two common goods of great importance to the whole community: the hydro-geological system and the quality of landscape. In so doing he produces socialized economic value, since the landscape

he helps to maintain, in the case of Tuscany and similar places, is one of the main driving forces behind the tourist economy.

A beautiful olive grove produces good olive oil, and, moreover, an oil that not only looks good, smells good, tastes good and is nutritionally good, for the oil this field produces is also a good social operator. As the product of a process shared by the whole local community, it becomes a topic for conversation and, as such, contributes to social regeneration (Malaspina & Vugliano, 2005).

A beautiful olive grove and its world of supporting values, as pictured here, is an inheritance that reaches us from long ago. In many parts of the world these values and customs may now be seen as 'cultural fossils', the remains of a bygone world. In other places they may be seen as limitations on development, part of what must be left behind, if we are finally to enter the modern age.

In these notes we shall try to show that we can, or maybe must, think differently. Our beautiful olive grove with its value system and supporting customs can be seen in a completely different way: not as a cultural fossil, not as a limitation on development, but on the contrary, as 'a seed for the future' - a thing from the past, that is, but one that could develop on new ground, giving rise to new possible futures.

Before discussing these issues further, I would like to add another introductory consideration. The arguments supporting the prospect outlined have been drawn mainly from experiences in the north of the world, from social and cultural contexts where, with rare exceptions such as the Tuscan hillside mentioned, this way of thinking and doing things has by now been almost totally overrun by the new ideas on productive efficiency and destructive pervasiveness of market culture. It is clear that in these contexts the prospect indicated, although feasible, is objectively speaking difficult to achieve since it involves reviving discontinued traditions that are on the way to becoming extinct. On the other hand, it should be stressed that this same prospect, if acknowledged in time, is far more likely to be successful in those areas of the planet, mainly the South and East of the world, where such values and customs as we are describing are still solid and potentially vital.

### **Out-dated industrial models**

Let's leave the Tuscan hillside with our olive grove and look down, towards the valley bottom, and out, to the world as a whole. What we see dominating is an agro-food system that works like a huge paradoxical machine. A perverse system that fails to resolve the problem of hunger, yet at the same time has made obesity one of the greatest plagues of our time. Furthermore, to achieve these results, it acts as a powerful waste-layer, consuming resources, impoverishing land and reducing diversity, both genetic and cultural.

How is it possible that such a paradoxical situation can have developed and be considered acceptable by (almost) everybody? That's a long story (Capatti, De Bernardi & Varni, 1998; Capatti & Montanari, 2002). The agro-food system we know today is the application, in agriculture, of ideas and organizational methods that we could nowadays call 'out-dated industrial', but which seemed for many years to be successful formulas. Such ideas and organizational models have led us to see fields as industrial areas, plants and animals as machines, and food as goods to be standardized and trivialized... at all costs: at the cost of degrading the ecosystem, erasing age-old patterns of social organization, wisdom and expertise, ultimately to the detriment of the health of those very consumers who were to be the beneficiaries.

Faced with the emerging problematical issues inherent in this way of conducting things, the prevailing attitude in the past, which is still widespread, is that all this is a necessary evil, the sacrifice to lay on the altar of growth (in the so-called developing regions of the world), or of economic survival (in areas of long-standing industrialized agriculture). However, nowadays things are changing. The manifest visibility of environmental problems; the diffusion of epidemics in breeding farms and human illnesses associated with bad eating habits; aversion to genetically modified organisms; evidence that, in spite of the quest for efficiency, said to be sought at all costs, a large part of humanity is still suffering hunger... taken together, these phenomena have gone beyond the point where the crisis in our industrial agro-food model can still remain hidden.

Stimulated by the crisis in the dominant model, other new ideas are emerging about how a sustainable, industrial agro-food system might look; new ways of thinking, that is, about the sense of land cultivation and food production, about how it might no longer respond just to the logic of economic productivity, but be recognized as one of the most profound expressions of

human action, related to the individual, society and nature. This is a new way of seeing things that implies a new idea of industry, economy and society: a society in which cultivating a field means first of all taking care of 'mother earth', looking after the most precious good that humanity has at its disposal now and for future generations. This is a society in which the production, preparation and consumption of food is considered to be at the same time a response to a necessity, a quest for pleasure and a form of social rapport - profound activities that go well beyond simply nourishing our biological machinery, and that should be conceived and actuated as part of a more general framework. This wider framework we today know by the name of 'transition towards sustainability' (Manzini & Jegou, 2003).

It is not among the aims of these notes, nor in the capacity of the writer, to draw the complex picture of how these emerging ideas may turn into a new general development model, or indeed how a fully sustainable agro-food model might work. On the other hand, since the transition towards sustainability is a social learning process, no-one can really claim to be capable of so doing.

The emerging ideas proposed here are a contribution to this vast, collective-learning process, undoubtedly an incomplete contribution, but maybe a useful one in indicating some of the characteristics of the evolution in progress, and particularly in underlining those most relevant to what we are interested in, i.e. to what, hopefully, design can do.

### Agro-food system articulation

The contemporary agro-food system can be described as a stratified reality, a macro-system in which different agricultural philosophies and food cultures exist side by side. Here we shall focus on five: *the traditional, classic, experiential, and advanced agro-business systems, and social experiments*. This stratified reality is the context wherein design operates and selects its own options.

- *The traditional system.* In different ways from region to region, we still find forms of organization and traditional lore which reach us from the depths of rural history underlying the contemporary agro-food system. This stratification of the system is what remains of pre-industrial agri-

culture, of its learning, its organizations and its local and seasonal food circuits. As we have been able to observe, this underlying stratum can be presented from region to region either as a still vital, living tradition or as what remains of a disappearing system.

This subsystem as it is presented today does not make demands on design. If and when it does, as we shall see, that means that it is already turning into a different form, which we shall discuss later. This underlying stratum is threatened and often overwhelmed by what we can call the dominant agro-industrial system.

- *Classic agro-business.* This is the agro-food system organized by archaic industrialization formulas as discussed previously. It leads to mass-production and consumption by agricultural firms and breeders which we call industrialized because they are mechanized, 'chemicalized' and, more recently, 'bio-technologized'. This is the dominant component of the current food and agricultural sector in industrialized countries and, considering the major dynamics in action, tends also to be so in those not yet industrialized.

The classic agro-industrial system places equally classic demands on design: agricultural machinery, product packaging, apparatus and equipment for food preparation and communication strategies for an undifferentiating undifferentiated and undifferentiating public (hooked by low prices and a profusion of alluring advertising).

- *Experiential agro-business.* This is the component of the agro-food system which is most highly influenced by the most forceful logic of the moment, and whose primary objective is to research and promote the particularities of experiences that products and services bring (or should bring). This research has found in food, and the places where food is produced, a privileged application field (as is obvious, given the peculiarly sensory and experiential nature of food and its typical places of production).

With the emergence of this new and growing component of the agro-food system over the last few decades, new demands have emerged for design related to product identity and place of origin, to the conception of new sale and restaurant services, even to the planning ex-novo of new food products as applications of design of/for experience (this is the application field of food

design in its strict sense). Given the importance of this issue, we shall return to it later.

- **Advanced agro-business.** This is the aspect of the contemporary agro-food system that lays its bets on technological solutions to the growing environmental and social problems. It tries to respond industrially to the huge demand for controlled, organic food products. Advanced agro-business is the expression in agriculture of the most interesting shapes that industry is taking. It entails the extensive application of organic and biodynamic cultivation methods, and the use of advanced minimal food processing systems. DOP (produced by guaranteed production process) and IGP (of guaranteed geographical origin) labels can be seen in the same light, as a legal representation of the idea of advanced agro-business.

It requires considerable design capacity to see the food industry as an advanced industry with these characteristics. Obviously this is true on a technical and organizational level, but it is also true on a cultural and communicational plane. This gives rise to an as yet embryonic demand on design: an industrial design for advanced industry orientated towards such a 'sensitive' production area as food. Again we shall come back to this later.

- **Social experimentation.** This is the latest and most dynamic layer of the agro-food system, and one whose future is as yet unclear. It is the move over of some of the major dynamics, such as the spread of networks, the demand for 'natural' foodstuffs and, more generally, the quest for sustainable solutions. It is these macro-tendencies as a whole that give rise to the social experimentation we are referring to. They are experiments that come from both the demand side (such as collective purchasing groups) and from the supply side (the Slow food organization, organic product networks). We also refer to them as 'creative communities' because they are mostly the outcome of individual and collective self-organizations inventing new ways of resolving a problem or opening up a new opportunity.

Except for a few special cases, these social experiments have not yet expressed a clear, deliberate demand for design. However, in my opin-

ion, it is precisely on such projects that design should focus its attention, in order to play its potentially constructive role in promoting a sustainable agro-food system. The reasons for this conviction will be the subject of the following paragraphs.

I would now like to describe in greater detail the role design can play in the two most recent layers of the agro-food system: experimental agro-business and social experimentation.

### Experiential agro-business and food design

Experiential agro-business is the way in which the emerging service and experience economy (Pine & Gilmore, 1999; Jordan, 2000) is taking shape within the conventional (industrial) agro-food system.

One prerogative of this phenomenon is the importance attributed to the diversity of products and places of production. This implies an inversion of tendency with respect to the standardization policy offered and imposed by the classic industrial model, which is undoubtedly positive. However, this potentially positive shift has been more than counterbalanced by a series of negative implications that can be grouped and expressed as 'the spectacularization of food and agriculture'.

In practice the process runs like this: the service and experience economy in its present form has to be constantly refueled with 'fresh' cultural and social resources able to trigger a strong emotional response, in other words, able to create a spectacle. These fresh resources are often drawn from the pool of knowledge, customs and characteristic local places that the traditional system (or rather, what remains of the traditional system) intrinsically possesses. In itself, this would not be a bad thing, if using these resources provided an opportunity for their regeneration. However, this is not the case: their use for the spectacular tends rather to turn them into empty images behind which nothing of what they really were remains.

In the absence of any profound reflection on the identity of places, communities or their products (and in the absence of any sensitivity towards issues relating to the sustainable use of physical and social resources), the experience and service economy leads us to treat food, community and local identity as though they themselves were products to be promoted and consumed. The

result is that typical local products are transformed into commercial brands, and places of production and producer communities turned into theme parks and the characters that populate them. Furthermore, any genuine public interest is reduced to its most hedonistic dimension (as in most television programs on the subject, which are conceived in such a way that they can be seen as a sort of food pornography).

These dynamics, as interesting at their outset as they are disheartening in their practical consequences, are counterbalanced by the extraordinary activities of Slow Food. I shall come back to this in the following paragraphs. First, however, we must briefly consider how design has confronted today's dominant tendencies: what has it done and what could/should it do?

We have already mentioned how the experiential agro-business has placed clear, high demands on design, demands to which designers have generally responded by adapting their own ideas and habits to the new necessities. In other words they have adapted themselves to the behavior and thinking of the service and experience society. In so doing, updating their 'classic' competences (product and communication design) and adjusting their more innovative ones (like strategic and service design), designers have started to play a significant, active role in the emerging agro-food system. Having said this, we should add, to my regret, that this significant, active role has not so far led them to any profound reflection on the meaning of what they have been doing. Except in exceptional cases (which certainly exist), designers have gone uncritically into the service and experience economy, themselves joining the main forces driving towards this spectacularization.

To get out of this role governed by the thinking currently dominant in economics and the media, designers should ask themselves some more profound questions about the sense of the experiences they are proposing. It is a difficult reflection, but one facilitated by the existence of an extraordinary phenomenon for comparison, that of Slow Food. This is an organization that has successfully shown us all that it is possible to link sensory experience with the safeguarding and valorization of characteristic products, together with the knowing and organizational forms they spring from. In this way, it is playing an extraordinarily important role (first in Italy, but now on a worldwide level) in the safeguarding and regeneration of such a precious common good, as is the cultural variety of local food production.

The 'presidi dello Slow Food' are diffuse, local organizations spread throughout Italy that aim to protect specific local products. Looking at Slow Food as a 'designer', what we can see in my opinion is the most positive example of strategic design, of service design and of experience design applied to the world of agriculture and food today (and this even though, to my knowledge, until a few years ago, none of its promoters had had any significant relationship with the designer community). Slow Food teaches us that it is possible to carry out a design activity that goes beyond the spectacular consumption of what remains of a precious, historical heritage of knowing, flavors, places and social customs. Slow Food promotes a *post-spectacular design* (Thackara, 2005), able to promote identity and generate significant experiences, without entailing their transformation into empty images and rapid consumption; able to make of this activity an occasion for regenerating our traditional heritage, matching it to the most advanced technological and organizational possibilities (*advanced agro-business* as mentioned earlier) and able to turn it into a seed for a sustainable future (Manzini & Vezzoli, 2002; Manzini & Jegou, 2003; Meroni, 2005).

In order to explore the implied possibilities it is useful to take another step forward and consider the theme of social experimentation and its possible implications for design.

### **Social experimentation and multi-local society**

The issue has already been introduced in a previous paragraph: the spread of network systems, the widespread demand for 'natural' foodstuffs, and the quest for sustainable solutions have given rise to new ways of thinking and doing. This is happening both on the side of demand and of supply.

Let us consider in particular the implications of the spread of network organizations so much talked about in recent years. This phenomenon has led to a huge increase in connectivity (i.e. in the number of meaningful interactions concretely possible). In turn, the high level of connectivity achieved has served as an enabling platform for new forms of organization where the network is not only a technical infrastructure, but also becomes a powerful, new organization model that breaks vertical hierarchies and generates horizontal, un-intermediated, potentially peer-to-peer solutions.

All this enables us to imagine a new family of organizations, at the same time decentralized and open to wider systems, an organizational model, that is, which leads us to redesign from scratch consolidated ways of doing things, classically based on low-connectivity systems. Clearly the radical adoption of network models is not in itself a solution to the social and environmental problems we are faced with today (even Al Qaeda and certain pedophile organizations are based on the intelligent application of network organization models employing the horizontal communication technology available today). Nevertheless, these organization models, and the technology that makes them possible, present interesting and promising opportunities of potential value to the development of new approaches in the agro-food system.

The spread of the Internet in particular has promoted certain relevant and potentially generative issues, ideas that are also capable of generating new ideas in operational areas far apart from those that produced them: notably, the *network economy*, *open source systems*, and *peer-to-peer organizations* (Stalder & Hirsh, 2002; Cottam & Leadbeater, 2004). Can all this be translated in some way to the agro-food system? What could we understand from the expression 'food-network?' This question still does not have a clear, detailed answer. However, some partial answers have already emerged in the social experiments referred to.

Let us consider activities like fairtrade purchasing groups, organic markets in cities (*farmer markets*), new producer/consumer relationships (such as 'adopt a tree' or 'vegetable season tickets')... but let us also note how the success of fairtrade shows in a concrete way that direct, fair relations are possible between producers and consumers even when far apart.

Let us link these activities, which are mainly centered on the issue of virtuous un-intermediating, with those related to the valorization of local products (Emude, 2004). Once again, Slow Food activities come to mind: from the diffusion in Italy of the local organizations of the 'presidi dello Slow Food', local organizations aiming to protect specific local products, to the extraordinary initiative of *Terra Madre*, whereby thousands of small agricultural, animal husbandry and fishing communities all over the world have been identified and networked together, united by their possession of specific production and food know-how.

If we try to see these and other similar promising cases as a whole, a new

vision of the agro-food system emerges (maybe even a new vision of the world!). What appears is the image of a multi-local system, of a 'world' endowed with an extensive variety of places and communities - communities with their own individual identities, but open and well-disposed towards contact; local communities with a high connective potential, in peer contact with other local communities, with whoever and whenever useful, just as in peer-to-peer organizations on the Internet.

We see a multi-local system in a network economy where the number of knots and links available is more important than the knots themselves, and where basic knowledge, like knowing about food and its production, is a common good accessible to communities, within the limits of the sustainable use of any common good. In short, we are envisaging a multi-local system able to orientate the development of advanced agro-business, steering it more clearly towards sustainability (Manzini, 2004a; Manzini 2004b; Distributed Economy Labs, 2005).

### Strategic design and new food networks

If the vision outlined is to become feasible and the multi-local agro-food system is to become a reality for the majority, then communities of producers, consumers and producer-consumers need to consolidate and 'make themselves visible'. They must be able to display their products and skills, their needs and wishes and their willingness to do something towards satisfying them. There must be a platform, an infrastructure, that gives them the real possibility of making contacts, of presenting their offers, of building relationships that are not only economic, but are also neighborly and, where appropriate, expressive of solidarity.

In my opinion, the agro-food system lends itself to being reorganized in this way. The experiences we have discussed, though minority experiences, tell us that this is possible. Furthermore, food and land are two fundamental elements in the lives of everybody. It is possible to develop interest and movement around them on a wider scale. When talking of them we can talk about necessity and pleasure, about past and future. Knowledge and skills that risked being forgotten can be revived around them. Food can help us rediscover the quality of local and seasonal products, but it can also lead to the enjoyment of products from far away that are produced by a familiar, friendly community and so, as the Slow Food slogan says, are 'good to eat and good to think'.

All this can develop from the bottom up, as forms of social self-organization, but designers too can take part in this virtuous process. They can bring their specific skills to assist in community building, improving visibility, making communication channels more fluid, implementing enabling platforms that facilitate the diffusion and effectiveness of the activities of these communities. From here, bringing their skills in the field of *experience design* into play, they can contribute to the promotion of food networks where aesthetic and sensory qualities *also* circulate, but freed of the tendency towards spectacularization: indeed aesthetics and sensory perception are fundamental dimensions in any human relations, and all the more so if the object of these relations is something as profound and important as food.

To conclude, in the metaphor of agriculture, designers can collaborate in working the ground in which seeds of both new and ancient cultures can really germinate and grow into the plants of a sustainable food and agriculture future: a future where there are beautiful olive groves, with all the wealth of meaning implied in that expression.

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