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# INNOVATION IN DESIGN EDUCATION

Proceedings of the Third International Forum of Design as a Process

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## INNOVATION IN DESIGN EDUCATION

Theory, research and processes to and from a Latin perspective

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### NEW MODELS OF CONSUMPTION: SCENARIOS FOR SUSTAINABILITY

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The current consumption model identifies the base of the well-being of individuals and the community itself as the possession of property. Agriculture is no exception; as well as other sectors of the economy, it is subject to strict laws of supply and demand: food has slowly transformed into an industrial product, on the one hand becoming increasingly affordable and abundant, but on the other more standard and approved. In addition, if we consider that food chains are one of the most energy-intensive and polluting sectors, it follows that the current pattern of consumption can no longer be socially, environmentally and economically consolidated and supported. The purpose of our work is to define, through the analysis of different case studies, new scenarios of possible development, which can create new positive relationships between the protagonists of the system, and in which the flows of energy and matter constitute new resources and opportunities for the territory.

••• Model of consumption, food system, local economy, territory •••

### WHAT IS A CONSUMPTION MODEL?

A consumption model is a set of cultural and economic factors that describe a society and in particular define the characteristics relating to the use of goods and services. In the economic sphere, and in detail in marketing, with consumption models we define the set of issues specifying: what, how, what and when we buy something.

The analysis of consumption can generally be conducted through the definition of three variables: the economic, psychological and sociological one. Of course it should not be surprising that this type of analysis is derived from marketing analysis since it represent, at least until today, one of the greatest economic tools for understanding and developing the consumptions.

Returning to the variables, the economic one represents a limit to the self consume, and it can be identified with the contingencies related to the economy: disposable income, interest rate levels, the relationship between supply and demand, etc.. The other two variables are instead related to the attitude of a person. In particular, the psychological variable refers to

the perception of the individual in relation to the consumption as the result of the meaning attributed to purchasing, the expectations and the perceived risks. In sociology, consumption is linked to the influence that membership in groups has on the subject. Contrary to what happens to the psychological aspect, it is not important the opinion on a good or service, but the claim that it receives within the social group of reference to which the subject wants to belong and to receive consideration.

The sum of these variables, as well as providing excellent starting points for the market analysis as mentioned above, may help us defining a "lifestyle", or the sum of all the values, goals, aspirations, attitudes and opinions that guide the behaviour of each individual. Distinguishing a way of life, and especially its cultural aspects, is the first step in understanding and addressing the definition of a consumption model.

The culture, as it was defined by the geneticist and anthropologist L.L. Cavalli Sforza, is "the accumulation of global knowledge and innovation, resulting from the sum of individual contributions transmitted across generations and distributed to our social group, that affects and constantly changes our life."

Culture is thus a system of rules, resulting from interaction with others and with cultural artefacts, which control humans and forge, placed within a context of economic, religious and legal, the reality of individuals. (Robert Welsch and Luis Vivanco, 2009).

The cultural conditioning is therefore what governs human behaviour and makes us consider as normal certain behaviour as well as gestures and customs.

The models of consumption, whose interpretations represents the focus of marketing studies, are very different and varied with each other, each shaped on the differences of consumer subjects.

It is the legacy of social fragmentation that occurred between the years '80 \( '90 \) as a result of ongoing economic change but also of the increasing weight exerted by consumption and media as factors of the different social positions.

Marketing divides the market into several "lifestyle" in order to create niches in which include products and services, but the consumption model which is universally recognised as the basis of modern society, in many parts of the world and in many cultural systems, is the consumerism.

### THE LINEAR MODEL: CONSUMERISM AND FOOD

The term consumerism refers to a cultural model that induces individuals to find meaning, fulfilment and acceptance primarily through the use of goods and services, causing people to associate high levels of consumption to wealth and success. Already by mid 1800's Marx criticised capitalism for not producing goods in order to consume, but in order to accumulate wealth. The basis of this was the capitalist economic system that, by investing money into commodities used in the production process and sold as a product, drew a sum of money greater than what was invested.

The product of human labour, the goods, acts as an "ideological fetish" who is credited with an independent life which conceals the social relations between men. Thus, in Marx's theory of value, goods rise to the role of social intercourse, and likewise the social relations between men take on the appearance, in exchange, of relationship between things. Consumerism appears as a mass phenomenon in Europe and United States after World War II when a general enrichment, highlighted by increased demand for food and goods, showing to western countries a degree of prosperity hitherto unknown.

Maintaining this prosperity was closely linked to the continued expansion of demand for goods and their consumption. Thus the "consumer" began to be induced, by advertising and the growing presence of the media, to buy more and more. Consumerism was helped by the spread of credit instruments, including credit card, and the rate of exchange, which allowed them to purchase goods while not having the money to afford it.

So it was that many people, though not wealthy, began to buy goods that were no longer needed to meet precise and real needs, but whose possession made them feel in step with the times of a company continues to grow. It began, in other words, the economic and cultural phenomenon that we know and that lasts to this day, and that if on a side presents numerous problems, on the other is a good social system in which you work to consume and consume to work.

Too bad that the mechanism of GDP is unfortunately perverse and wrong: you can not consume more and more, there must be a balance. Economic growth as it has traditionally manifested itself does not produce wealth or improves the quality of our life anymore. The alarming environmental implications, the numerous social problems and the tragic problem of energy resources are now under the eyes of all.

It is sufficient to analyse the data reported by the Worldwatch Institute, the preeminent observatory of the environmental trends of our planet, in his "State of the World" to realise how our "lifestyle" is not only not producing prosperity but, if we do not take concrete decisions in a short time, may even have catastrophic effects on our planet.

In 2006, the 65 countries with high incomes were responsible for 78% of spending on goods, but constituted only 16% of the global population. The same year, the United States alone, spending on goods was 9.7 trillion dollars - about \$ 32,400 per capita - which accounted for 32% of total, with only 5% of world population. The Worldwatch's report points out clearly that these countries urgently need to rethink their consumption models, because the planet can not sustain such high levels. In fact, if everyone lived like Americans, the Earth could sustain only 1.4 billion people instead of the actual 7.

At slightly lower levels of consumption, although still characterised by high incomes, the planet could support 2.1 billion. But even with lower incomes > the equivalent of an average earn in Jordan and Thailand > Earth could sustain less people than the current population. These figures show a reality that few want to face: with the current 7 billion people on the planet, modern models of consumption, even at relatively low levels, are not

sustainable. (State of the World 2010 / Transforming the culture of consumption).

The current model extends the gap between poverty and wealth, and now that we are illuminated by the effects of the economic crisis, we approach this abyss, disguised by years of reckless and enjoyable spending, we are outraged and protest for fear of losing what belongs to us. Frightened by the possibility of having to stop consuming, we are approaching the arms of the green-economy, which seems to be not so green, whose purpose is only to feed in different ways the least mechanism of consumerism.

### FOOD AND CONSUMPTION: CURRENT SYSTEM FFFFCTS ON FOOD

The current model of consumption is the outcome of the development of a industrial centralised system, based not on the welfare of people, but on economic and political values of the market.

As any other economic sector, agriculture have applied the strict laws of supply and demand, with substantial consequences and fallouts on the agri-food industry.

The food has gradually transformed into an industrial product, on the one hand becoming increasingly affordable and abundant, but on the other more standardised.

"In the global system of agri-food industry, food have become as any other goods, neither more nor less, such as oil, wood and other goods to be exchanged, the price is established around the world from the international stock exchanges. Wheat, corn, coffee, cocoa all of them are commodities how metal or energy, goods subject to supply and demand law, distributed on market without any qualitative differentiation and without any matter to who produce "(C. Petrini, 2007)

The production intensification has made the large-scale use of pesticides and antibiotics necessary, in order to respond to quantitative and aesthetic standards demanded by the market. Through the chemistry introduction, mechanisation and the application of the industrial principles to the agriculture, seeds and local races have been gradually supplanted by hybrids more productive and profitable, "the control of agriculture is passed from the hands of farmers to those who can influence the market "(R. Patel, 2007).

This profound change began around 60's and has been widely introduced both in Western countries than in developing ones in order to defeat hunger, getting off what is called the Green Revolution.

As the FAO (Food and Agriculture Organisation of the United Nations) reported, during the Green Revolution, governments in both developed and developing countries invested heavily in agricultural research. Modern science was put to use to find ways of producing more food and this revolutionised the way agriculture was done. Intensive breeding and selection led to the development of high-yielding varieties of crops and more productive breeds of livestock. There were also breakthroughs in the development of agri-chemicals, like pesticides and fertilisers. And to bring the revolution directly to farmers' fields, governments supported producers with encouragements to use these new farming techniques

and technologies. Initially, the revolution was seen as a tremendous success. As populations grew and demand for food increased, so did the food supply. Food prices remained stable. But since the 1990s we have become aware that the Green Revolution's surge in productivity came with a heavy price.

Industrial agriculture was not longer able to create a virtuous balance between used and released resources, getting an extremely energy-intensive and polluting process. The land has been impoverished and reduced to mere substrate in which to plant seeds, feeding and defending with pesticides and no more with sun, manure, and the crop rotation, but with chemical fertilisers; these changes have altered the soil fertility, distorting the natural nitrogen cycle.

The farm has become industrial and quoting M. Pollan, "agriculture is no longer an ecological cycle, but has become a factory ... and as all factories, the factory farm is powered by fossil fuels."

The effects of this current industrialisation are considerable, ranging from air pollution to the over soil depletion, substantial irrigation needs to the dramatic loss of biodiversity.

According to the FAO, 60% percentage of the world's ecosystems would become degraded or used in an unsustainable manner; since 1990 we have lost about 75% percentage of the genetic diversity of agricultural crops, and three-quarters of global nutrition depend on only 12 species of plants and 5 races of animals. This loss of diversity is called "genetic erosion", and also in Italy has caused an extreme simplification of farming systems, from the detriment of the sustainability to the crop security. This loss is directly reflected in food: considering the thirty thousand edible species in nature, only 30 are food crops that represent the 95% percentage of the world's food requirements and, of these, wheat, rice and corn provide more than 60% percentage of the calories consumed.

Concepts such as seasonality and typical food have been altered by inducing consumers to dispose of any product anywhere and at any time. Adding to this the policy of lower prices, implemented by the large-scale retail trade to respond to the competitive logic of the market, we see a clear separation between the sale price and the actual value of the product. Therefore the cheapness and convenience behind our purchases hide different consequences. Primarily on the relationship that we have with food. Indeed, in the last few years, we have left the natural world behind, altering our natural rhythms and losing our material culture;"There has never been in human history such a confusion about what is good to eat or not eat", "with its 17,000 new food products introduced every year, and the marketing muscle used to sell these products, has overwhelmed the force of tradition and left us where we now find ourselves: relying on science and journalism and marketing to help us decide questions about what to eat." (M.Pollan, 2009).

The loss of knowledge combined with the wide choice available leads to waste an enormous amount of edible food, and to dissociate the impact of purchasing decisions from the caused effect on land and health. What we are experiencing is a "big fat contradiction"

(R. Patel, 2007) "Agricultural production could abundantly feed twice the present population on the planet" (A. Sangrè, 2011). In England, about 6.7 million tons of food per year are thrown away, which corresponds to 15 million tons of carbon dioxide (DEFRA, 2007); in Italy are thrown away over ten million tons of food per year, means that every Italian family spends an average of 515 euros per year in food that it will not consume. The alteration of the relationship with food has consequences also on health, the increase of disease s and dysfunctions related to food in Italy cost about 8.3 billion euros per year, their average rate has increased from 7.3% to 9.9% between 1994 and 2007.

The listed data represent the magnitude of the problems arisen by the food industrialization. The consequences in terms of social, cultural and environmental costs are clearly visible throughout the production chain, from the transformation of peasants into "pieceworkers" (Petrini C.), to the loss of biodiversity; from the dependence on oil to the intermediaries number increase, from waste to health damage.

So what does quality mean in this case? The values generated by an industrialized system are related to standardization and to approval, in addiction to the aseptic and standardised production context, to the quantity and the wide choice proposed, as well as the competitiveness of the final price. Nevertheless, parallel to the burgeoning agricultural industrialization, numerous realities have sprouted up, breaking away from the centralized economic system, have autonomously and consciously tried to interpret a different food system. The promoting protagonist of the projects, are vary in nature from small producers as purchasing group and food communities, to the transition towns. As the variety of proposed solutions, some explore the relationship between producer and consumer, others bring to centre the environmental and energy problem, another ones the fosterage of community and local culture. In all cases it is clear, however, a strong need for change able to re-establishing the natural relationship with food and nutrition.



FIG. 1. CURRENT MODEL VALUES.

### TRANSITION: CASE STUDY

To a model of consumption, strongly linked to concepts of globalisation and centralisation of power which finds its identity in the uniformity and standardisation, several alternative models developed in parallel due to a spirit of criticism and objective difficulties.

These development models offer a different vision of economy "based on a clear and conscious choice" moving "the interest from real people" and restoring "a balance between city and rural life" (E. Schumacher).

It is also important to consider how this quest for independence and desire of detachment from the current system, it does not act as a sense of niche but it is reflected in a widespread manner in the Community policies and initiatives in many parts of the world, especially since they represent the central question about food or energy and not merely an economic aspect.

Many of the cases that will be presented below represent a transition from the current situation, a breaking point and reinterpretation of existing rules of the game, an upheaval that generates a positive impact on society, or to be more precise on community, on economy as well as of course the environment.

The dynamics that are put to use are based primarily on redesigning the relationship between the producer and the production environment, among those who consume and the community; between education and the promotion of a lifestyle more aware and active. It then tries to change the point of view, abandoning the individualistic attitude generated by consumerism, to focus on new concepts of autonomy and awareness.

### CASE STUDY: ANALYSIS AND SELECTION CRITERIA

Looking for practical steps and concrete measures to witness the translation of models and attitudes, we remain stunned at the sheer variety and richness. The mass of case studies on consumption models on food and alternative energy is indeed wide and varied, a quantity which made necessary, as well as a first screening, a catalog for macro arguments and a definition of the limits of intervention. The case studies chosen are confined within a boundary defined.

Three distinct areas of action have been told apart, mainly triggered by the mode in which the initiative was born and grew.

The three macro sets have been identified under the name of: policy, community and city.

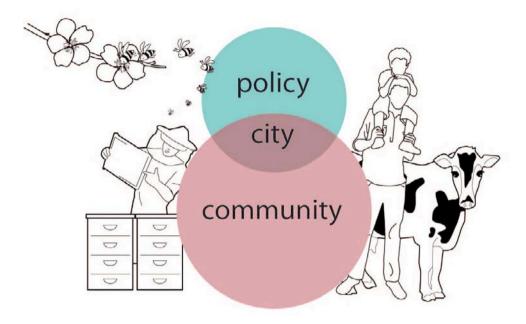


FIG. 2. THE THREE MACRO SETS: POLICY, COMMUNITY, CITY.

### **POLICY**

The term policy refers to all the initiatives "top-down", or that are proposed and sponsored by public or private corporations. Education and promotion policies, primarily aiming at information and dissemination activities, space out to real food management projects in the urban area. Giving an overview of the various initiatives, projects aim to:

- TO PROMOTE and EDUCATE citizens towards more sustainable and healthy lifestyles through initiatives ranging from simple awareness campaigns to the redesign of food system in school.
- TO INFORM about products, as in the case of labelling policies, beyond the mandatory notions about origin, variety and nutritional value and try to guide consumers towards a critical choice. Such in the case of the Carbon Footprint, a British brand, that indicates, through the icon of a mark on the packaging, the amount of CO2 required for the production, processing and transportation of the product.
- TO PROHIBIT or better INHIBIT certain attitudes or choices which include for example choice editing policies. One of the best examples is the campaign against the use of plastic bags, operating in different European countries, or with campaigns of inhibition, as in Ireland, where the application of a fee to plastic bag has leaded the consumer towards the reusable ones.
- · TO STIMULATE the local economy of small scale, not only through a policy of

financial assistance and facilities for access to credit, but mainly through initiatives that enable small farms to be considered in tenders for public canteens or supplies in catering.

• TO CONSERVE the environment and biodiversity: on the one hand through the regulation of human activities in certain areas designated as protected, such as restrictions on fishing and the collection of certain mushrooms, herbs and flowers; on the other, through awareness of visibility for producers who choose to nurture and cultivate native breeds and seeds, or which have their own working and processing.

### COMMUNITY

The community includes those initiatives that develop from the "bottom". Proposals are often supported by the courage of individuals who, dissatisfied or crushed by the economic and social system, choose to try a new way, regaining possession of their autonomy and identity.

In other cases, the push for change is primarily promoted by ethical grounds, rooted in the refusal of the current logic of the global and centralised industrial model. This separation leads to put into practice and to promote behaviours and lifestyles more aware and proactive. So we can see notice the presence of motivation from economic and from ethical issues, a mix that leads to the common goal to experience a parallel and alternative model to the dominant one.

The case studies collected show how these changes may be proposed and implemented by all the links in the chain, starting from the two ending poles, the producer and consumer, and then going through the distribution and the sales networks.

How does the relationship between producers and consumers change?

Between producer and consumer the main passage being implemented is to cut the number of intermediaries that separate them, outlining a "short" chain.

The way this transition occurs may be of various kinds: the direct sales company, and buying groups in the local market.

With regard to direct sales, however, we must premise that this practice is actually difficult to classify uniquely. The economic linkages between small producers and consumers is often put in an informal setting and daily habits, in which the logic of exchange or direct relations have always been present. This situation makes difficult to assess in terms of quantification and determination its dimension. What is interesting, and when this step is an opportunity for farmers and ranchers to disengage from their position as the last link in the global market. To manage independently the processing and sale of products, becomes a way to reclaim the value of their work.

The farmer's market, now spread in various forms, adds to the direct relationship, the social side of the market and user-friendly and creates a new space for meetings between small producers and consumers.

Markets often self-regulate through their own disciplinary which sets out the characteristics

that a farmer must have in order to aggregate and sell their products. These specifications are often linked to the type of products, coming only from local territories, and their quality. If to promote the rapprochement between these two players in the sector is represented by the pole of the consumer, the most famous and popular initiatives concerns the "purchasing group" groups, which are appointed and developed differently according to the country in which they are.

Although in their specificity, they are examples of alternative food networks that seek to put in communication small farmers and urban consumers in order to create a relationship of trust and solidarity between town and country and to heal the rift between society and the environment that has been created by industrialisation and agricultural modernisation. They are also forms of support to agriculture, practiced on a small scale, through which it is re-evaluating the role of farmers, their work and their knowledge. These experiences of short chain seek to encourage healthy and seasonal food supply and thereby develop the local economy, as well as develop a sense of belonging to a community.

Since a few years the same networks have broadened the vision of the food chain to the energy production, by proposing the output of it from renewable sources "in a context of democratic energy." For example in the case of the "CO-energy" the service is based on using a public space for a PV system, especially designed for those who can not do it on their own.

### A NETWORK OF ALTERNATIVE DISTRIBUTION AND SALE

The initiatives born in this field are often driven by a strong sense of ethics and environmental responsibility especially with regard to the production of CO2, energy inefficiency due to the transport of large-scale distribution, the production of waste due to packaging and the unfair distribution of profits along the supply chain.

The analysed cases mainly run through three major tracks: the first concerns getting in touch the urban reality with the agriculture, the second one aims to change the logic of sale and packaging of products, the last one represents all the examples of production and distribution of energy from renewable and indigenous sources, the Smart Grids.

In the first case, it is not just matter of establishing a direct contact between producers and consumers, but to create a distribution network on a small scale that allows the firsts to sell their products without having to use their energy for trading and the seconds to buy fresh and local food not needing to go to the farms. Many people consider this goal as a re-appropriation of the world related to food, detaching itself from the logic of large-scale retail and food industry.

"Growing Community" is a prime example of how an alternative system of distribution can be implemented. The project was born and grew up in Hackney, a London borough located northeast of the city with the aim of putting the community in connection with agricultural producers. It is based mainly on providing a service that allows all citizens

who participate to have a supply of seasonal fruit and vegetables grown no more than 40 km away. Through a subscription you are entitled to a weekly box containing products. You can choose the amount and composition of them according to the weekly availability, the withdrawal takes place in the various "pick-up point" located in the district. The project was shared by consumers and by the local rulers, and currently in London other three networks, based on this model, are at their development.

With regard to the sales network, the focus falls mainly on the production of refuse due to packaging or wastage. There are several examples of outlets offering the application of the bulk sale of its products, including the "Negozio leggero" in Turin, or "Unpackaged" in London, or "In.gredients" in Texas (USA). Often the bulk is associated with proposals for regional and biological food as well as promotional activities and education for the community.

### CITY

The term City shall mean all the initiatives that see a close relationship between the policy and the community, both present but not necessarily with the same balance, leading to the realisation of projects with greater coordination and complexity.

Among these initiatives, stand without a doubt the transition towns. They have a very strong component of community, because the change is promoted and implemented by the population itself, but then the project is also supported by local authorities.



FIG. 3. THE MAIN SETS HAVE BEEN DIVIDED IN SEVERAL SUB-AREAS TO COLLECT ALL CASES STUDIES ANALYSED.

The concept of transition stems from research work carried out by Rob Hopkins, in collaboration with the Kinsale Futher Education College of Ireland. Nowadays it finds practical application in many communities. The transition towns have as objective the creation of a proactive approach to address the major challenges that the oil crisis and climate change is imposing on our generation. The Transition Towns can review our current economic system seeking to introduce a new one based on sustainability. Today, there are approximately 3823 official initiatives, located in almost 32 countries but mainly present in Ireland and United Kingdom. In Italy one example comes from Monteveglio (BO) that serves as a hub for the transition in our country (24 other cities).

Other examples are closely related to planning city-wide management of food and energy, namely the Urban Food planning. These initiatives have a strong component of policy, institutions and municipalities are often the organisers and sponsors of the implemented projects, but they are not limited only to handle the food in public canteens trying to offer a wider plan. Examples of Urban Planning have developed in many cities, including Amsterdam, New York and San Francisco.

Another interesting case is the recovery and upgrading of urban farms in Milan, which is part of the project for the organisation of the Expo 2015, to think back to these places as living and active within a new relationship between cities and agriculture.

### A NEW CONCEPT OF QUALITY

The realities seen in several case studies, even if with its own specificity, show a common way to develop a different economic model. The main challenge is abandoning the linear logic of the production systems linked to current consumption model, proposing and implementing methods of production and alternative distribution channels. To describe this process of detachment we have been used the word transition, in order to emphasise the process of change that they are carrying out. The crisis of the current economic model has meant to them an opportunity for change.



FIG. 4. TRANSITION MODEL VALUES.

For someone a radical change was the only solution to keep surviving, but, for others the crisis was not an obstacle but a challenge for creating wealth in their own territory.

One of the rediscovered values has been the autonomy. It has been created through the building of a short chain and the independence from the outside contractors, as well as the management of the whole production process, from production to processing up to sale. On the one hand, these choices have been led to an important cultural investment, to improve business processes that previously were not made. On the other hand, an economic investments have been need to fulfil new facilities. However, all that had the positive impact at every stage, in fact, managing the entire production process led to a greater awareness of the whole weaving factory. As a result, business decisions will be targeted not to the quantity but to the quality of the final product, with attention to both the breeding and farming method, the strength of this stage is the focus shift from quantity and required standardisation by the global market to investment on its know-how to ensure the products and production process quality. Furthermore, the consumer

is gaining a burgeoning quality perception, due to the direct link between the context of production and product.



FIG. 5. TRANSITION MODEL AS PERCEIVED QUALITY.

### SYSTEMIC APPROACH: TERRITORY AND QUALITY

The economic growth, characterized by a constant race to the consumption and by a linear production system, can no longer produce wellness or improve the quality of our life. In addiction, If this race corrupts the systems that guarantee the life, such as agriculture and breeding, to follow exclusively the purpose of economic prosperity, it will mean having to start seriously thinking about a change. Industry uses without planning and policies, except those dictated by the law of the profit, natural resources and turn them into disposable products. Insomuch as the polluting environmental implications, as well as the dramatic problem of energy resources are now under the eyes of all. The transition toward a new model of consumption is possible and desirable and it is, as we have seen, has already begun. For several years, the number of realities which are trying to offer a different way of thinking and acting are growing, they represent a new economy that operate on small scale and put in the centre of the project sustainability and community wellbeing.

The Design, which until now has been the instrument of consumption in its most frivolous form, may redeem and represent one of the interpreters of this change but as soon as possible need a shared understanding and good practices to follow.

The designer should provide through his work these models and help to implement them, thanks to the ability to create links and connections between different realities, creating a complex and interconnected system. A Design oriented to territory and local development, which considers the knowledge and resources, which fosters development and not exploitation, in order to generate wellbeing and not just profits.

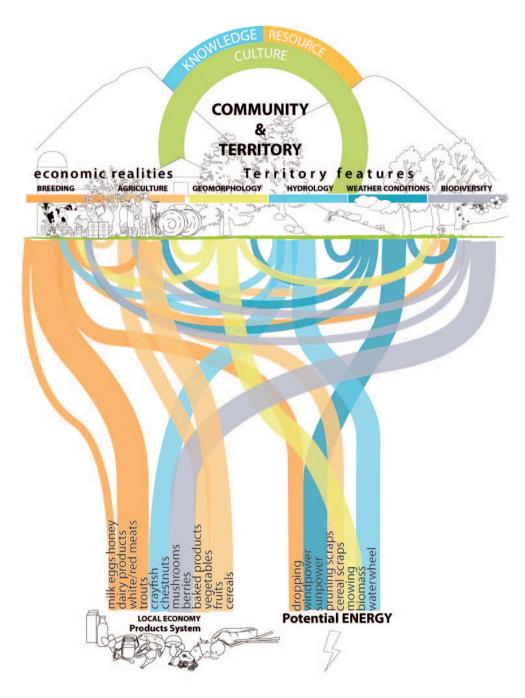


FIG. 6. THE CONNECTIONS BETWEEN THE COMMUNITY, THE TERRITORY AND LOCAL ECONOMIC REALITY REPRESENT THE POTENTIAL LOCAL ECONOMY, IN TERMS OF PRODUCTS AND ENERGY.

Each area has its own profile, made of soil and climate factors, cultures, traditional knowledge. Its inhabitants and the landscapes they have created, are a mixture of physical and cultural needs. The designer must understand how the identity was born and evolves in a territory in order to combine the peculiarities of production with the enhancement of traditional knowledge, while keeping an eye both on the true well-being and the economic factor.



FIG. 7. SYSTEMIC MODEL VALUES.

By studying the relationships between the current and foreseeable economic realities, the community and the territory itself, is difficult to determine what is the potential of the local economy, not only in quantitative terms of income, but also social, cultural and environmental.

The strength of agriculture is the close connection it has with the production of energy, but above all with the territory itself. No other activity is so closely related. This is evident, especially when you take as a reference point the realities of small-scale. They are the result of the territory in which they develop. In their products it is possible to find the territorial peculiarities that generated them.

The added value of a systemic process lies in considering these realities, not as individual units, but as part of a network, based on exchanges of matter, energy and knowledge among its members and the territory itself. The connections that are formed between nodes are based on a relationship of interdependence and create a sense of shared responsibility

throughout the supply chain.

In these terms, the product ceases to be a single entity, but it becomes primarily an expression of a network of relationships.

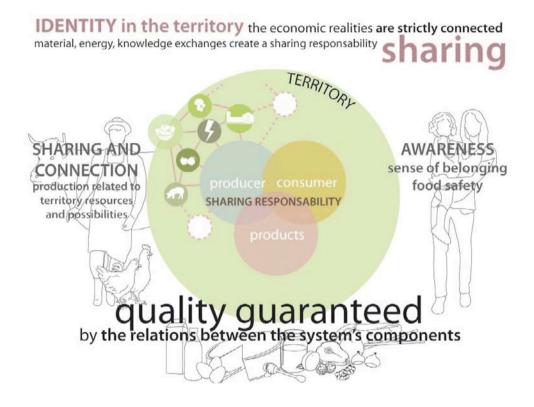


FIG. 8. IN THE SYSTEMIC MODEL, THE QUALITY IS GUARANTEED BY THE CONNECTIONS BETWEEN THE SYSTEM'S COMPONENTS.

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