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THE ESPERANÇA COMMUNITY GARDEN AND THE CHALLENGES OF INTEGRAL SUSTAINABILITY

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ABSTRACT

This paper presents the implementation of a community garden in a low-income community at Belo Horizonte, Minas Gerais, Brazil, as a research and extension project, practicing sustainability values. The garden was built in an area that has been made vacant by local authorities due to its geological risk. Three universities are working together in this initiative, mobilizing an interdisciplinary group of teachers and students. The guidelines of the interventions are the concepts of Systemic Design, Agroecology and Solidarity Economy, resulting in surveys, collective actions and discussions about the garden's principles and its management. Throughout this work, a spontaneous management group has emerged, establishing unprecedented interactions in the community, increasing their social cohesion. For that, the methodologies and references adopted include observant participation and field diaries, as well as participatory action-research. Some challenges have emerged during the process and the reflections are bringing new propositions concerning the increase of the local integral sustainability.

Keywords: integral sustainability, community gardens, Systemic Design, solidarity economy.

1. INTRODUCTION

This article presents an ongoing research-intervention started in 2017 in a low-income community with the goal of increasing the local social cohesion, collective identity and the protagonism of its inhabitants, using a community garden as the materialization of values and motivation for dialog, and having as indirect but important effect the improvement of their nutrition conditions and health through food sovereignty.

The project represents an interdisciplinary effort involving professionals and students from different areas such as economy, architecture, biology, sociology, psychology, promoting knowledge interconnection. The theoretical fundamentals are the principles of Systemic Network of Integral Endeavors, of Agroecology to Food Sovereignty and of the Social and Solidarity Economy. Those principles are reflecting the broadening of what we call integral sustainability.

The central methodology is the participatory research-action, complemented with focus groups, workshops and community works, supporting the community organization at the construction, planting, harvesting and distribution of their production, aiming to increase the local quality of life, as discussed next.

2. INTEGRAL SUSTAINABILITY

Sustainability has been recognized in the last decades as an essential value to the societies, as far as it comprises several features of the contemporary world and brings a humanist philosophy which has the potential to reconcile economy, society and the environment, diffusing the respect among the human beings and with the environment. The concept has been applied in many studies and researches and defends, through the conservation of the environment and the development of corresponding actions, the continuity and maintenance of life on the planet.

The concept of “development” is constantly being put together with the sustainability theme and acquires different meanings according to the social economical contexts of each period, that is, it is not neutral and it is also associated to the actors responsible for its conception.

However, many criticisms have been made, due to the overvaluation given to the economic development, letting apart fundamental necessities of a society, in disagreement with the purpose of a broader progress. As Naredo points out that (2006, p.17), “the failure of the “development theories” to eradicate the worlds’ poverty should open the eyes to the fact that this “development” did not intervene by increasing the conditions of life of the “peripheral” societies to capitalism, but provoking their crisis, without ensuring solvent alternatives to most of the population involved and sometimes giving rise to situations of greater suffering and detachment than those that were intended to be corrected *ab initio*”.

Therefore, this concept is being reevaluated, including other instances of power, incorporating at the contemporary world “the debate on the legitimate purposes of the appropriation of the material world” (ACSERALD and LEROY, 1999, p.24).

So, Naredo, Ribeiro (2003) and other authors consider that the development is based not only on the economic dimension, but must also embody social justice, equity, quality of life, including the openness of the citizen participation at the public life, that is, at the democratization of the decision processes. The concept “sustainable development” was proposed then, to connect the “development” with those new constitutive dimensions. Indeed, since 1990 the United Nations Development Programme promotes the paradigm of sustainable development based on three central points:

- the development of the people, to increase their opportunities, potentialities and rights of choice;
- the development to the people, aiming to guarantee the equitable appropriation of the results obtained by the population;
- the development for the people, to increase their power and the one of the communities, whilst they actively take part at the development process of which they are, at the same time, subjects and beneficiaries (UNICEF, 2001, p.58).

This Report describes two intertwined principles for human development: equity, in the construction and distribution of the benefits among human beings, and the integral sustainability, that is, sustainability in all its dimensions – economic, social, environmental, cultural and political.

Taking into account the current realities, new challenges are coming up and demand profound changes in several aspects of life including the increase of integral sustainability.

In this context, the *Esperança (Hope) Community Garden* project evolves, including the poorest populations who have little or no participation in public life and have no prominence around the decisions concerning their social realities regarding housing, food, education and health. The main guideline of this project is to observe and act on different aspects of their reality, trying to reach higher levels of integral sustainable development within their context of life. Along the process specific aspects stand out requiring special reflections, new behaviours, interventions and changes, conforming a mosaic with its particular challenges, as solutions must be developed collectively and equitably.

3. SYSTEMIC APPROACH

Integral sustainability understands that social, economic and environmental aspects must have equivalent weights. Cultural sustainability is also an element for this holistic approach, understanding that it is the individual's culture,

values, sense of belonging, ethics, that generate the energy and willingness for each one to take an initiative, get involved, participate in an activity or in a movement and make choices. Human beings, as a collectivity or an individual, are the actors and the addressee of every social action, even if not in immediate terms.

For long our society is failing at fixing problems that threaten human quality of life such as health, security, education and housing. Efforts that focus in one aspect and don't try to balance the others are not being effective. In order to achieve integral sustainability all possible elements that interfere in the context that is being developed must be considered. Therefore, a systemic approach seems to be more promising to achieve broader results.

Systemic thinking is a way of reasoning that considers the complexity of the whole. It is a cognitive process that leads to the capacity of perceiving, modelling and evaluating the consequences of actions in an expanded way in terms of time and space (Andrade, 2014). Nevertheless, considering all possible variables makes the activity complex, and therefore methodologies must be developed to aid human reasoning and actions.

The "Product Service System" (PSS) is a methodology that values delivering to the customer what she/he needs instead of just a product with a specific function [...], making products work together seamlessly, combining products and services to create a high market value. It is about "a smart combination of", "function/ value creation for clients", "working modular" and "combining sustainable concepts with powerful presence in the marketplace" (Halen, C., Vezzoli, C., Wimmer, 2005). It is about aiming at sustainable efficiency for a specific case.

Other systemic approaches are not focused in a specific case or productive chain. Systemic Design, for instance is a methodology that, based on 5 principles (output/input; relations; auto-generation; act locally, human at the centre of the project): makes a qualitative and quantitative analysis of the current process with its outputs and inputs; identifies its problems having this guidelines as a reference; and proposes a systemic model that optimizes resources (matter and energy), improve equitable relations, foster networks, value local culture and give priority to human quality of life over product generation. In order to balance the system and try and reach zero waste, it puts in relation businesses from different areas.

This project aims at fostering the development of Integral Endeavours, bringing initiatives that gather efforts and make a network involving productive activities regardless of their sector, that follow Systemic Design's principles so that together, the result of their activities is integrally sustainable and changes for the society's quality of life.

4. AGROECOLOGY, FOOD SOVEREIGNTY AND SOLIDARITY ECONOMY

Agroecology is an agricultural practice adapted to the productive requirements of the land available, encompassing a multiplicity of farming forms, as far as adopting ecological solutions in tune with the territorial, cultural and social-economic conditions of each agrosystem. It is qualified by its principles, that maintain management forms faithful to the natural conditions available, contributing to preserve biodiversity, natural resources and ways of life, building a character of integral sustainability (EMBRAPA, 2006).

Therefore, agroecology offers a theoretical reference that respects the "place", decreasing the environmentally harmful agrochemicals and highlighting the importance of the diversity in farming, transforming its principles and practices into reality and valuing the ancestral knowledge as a product of the popular wisdom (EMBRAPA, 2006). For these reasons, agroecology manifests itself in a plurality of formats, encompassing historically gathered knowledge, reinforcing solidarity values and practices and preserving the identity of the local actors.

Agroecology principles corresponds to the Systemic Design ones, applied specifically to the area of agriculture.

The concept of food sovereignty, also used in this project, arised in the 1990s associated to the agroecology concept, through the social demands of the Via Campesina association, that gathers peasant organizations around the world. They were mobilized against the neoliberal rural politics recommended by the World Bank and by the World Trade Organization and that was adopted by many governments, affecting the way the land was occupied to produce and commercialize food (Campos e Campos, 2007). Food sovereignty defends the right of autonomy of the countries to deal with its politics and strategies of production, distribution and consumption of food, protecting the small and medium agriculture, coinciding with the basis of the agroecological principles (Burity et al., 2010).

The connection of Food Sovereignty and Nutritional Sovereignty demands the assurance of the food autonomy of a nation and the fair production and distribution of food (Burity et al., 2010).

In this sense, the extent of the interventions that intend to be materialized at the format of community gardens, within the principles of solidarity economy and agroecology has the potential to reach a complex list of solutions to face the deprivations suffered by [...] communities that are poorly included at the market economy, by promoting an unpredictable endogenous process [...] in which it is observed the promotion of latent resources and knowledge in favor not only of food sovereignty, but also of the local development (Mello et al, 2018, p.13).

In Brazil, since the end of the 1970s, poor communities began to practice the sharing and reciprocity to fulfill certain needs and improve their quality of life. This originated a new economy, with opposite patterns to the hegemonic capitalism, called social and solidarity economy (Singer, 2001). Within its scope came out associative forms to solve public local problems and the mutualism, product of a disposition to create a collaborative schema of generalized gain and self-management (Alves e Bursztyjn, 2009; Ribeiro e Müylder, 2014; Borinelli et al, 2010, Flach, 2011).

Despite some variations of the models in this kind of organization, there are convergent principles in respect with the valorisation of the work produced, the use of technologies to fulfil the needs of all, the recognition of the

importance of the feminine concerning solidarity, the respect of the environment and the emphasis at the values of cooperation and solidarity (FBES, 2005, s/p). These principles constitute the basis of this project at the Esperança community garden, that is being built and maintained with real participation of the local residents, through the practice of agroecology aiming to reach their social cohesion and food sovereignty.

5. THE PROCESS

This project is the result of the confluence of needs, interests and resources. It all began by two projects that ran initially in parallel and are physically materialized by urban gardens – the LEIA, “Laboratório Ecosistêmico Interdisciplinar de Aprendizagem” - Ecosystemic Interdisciplinary Laboratory of Learning, that has an experimental garden at UNA University, where workshops on sustainable relations take place, and is closely related to the university’s Gastronomy course; and the Extension Courses on Urban Gardens from the Design School of the State University of Minas Gerais (ED-UEMG), used as a didactic resource and a means to communicate and practice the values of Systemic Design, as a methodological basis for design projects.

After a few inputs on the actions promoted by LEIA to create and maintain their garden, the ED-UEMG group and also members of the Architecture School of the Federal University of Minas Gerais have been invited to participate in some activities at the Santa Lúcia Community. The motivation was the request of a member of the community to one of the LEIA’s coordinator, also with the support of the urban planning institution from the local administration (URBEL). Its initial demand was to make interventions to deal with a piece of land within the community that represented geological risks, was a source of harmful synanthropic animals, putting in risk the health of the community and also used as a hidden place for illegal activities.

The project has evolved as a community garden developed to stimulate the protagonism of the local community. Its objective is to foster social cohesion, also acting in food security and compatibility of the use of this area.

Up to now, observant participation, meetings, focus groups, collective actions (“mutirões”) and workshops have been developed (Figure 1). These methods have been used to get to know each person involved, to try and understand their wishes and needs individually and as a community, to help understand and solve relationship issues, to effectively clean the land, making terrain level adjustments, enclosing the garden, planting and harvesting the productions. Welcome coffees are also being used as a moment to integrate and harmonize the group. The local participants are about a dozen members of the community, that live around the community garden, together with teachers, employees and children from the nursery school that is located in front of the garden, professionals and students from UEMG, UNA and UFMG from different areas, and employees of the urban planning institution from the local administration (URBEL).



[Figure 1] The chronological evolution of the Esperança Community Garden – First contacts at 2017 (left) and after interventions, at 2018 (right).
(Font: Collection of authors)

The central methodology that is being used is the participatory action-research (Tripp, 2005), chosen for being coherent to the particular demands of the project, due to the possibility of creating a continuously reflexive and pedagogical process within the community, articulating the principles of Systemic Design, Agroecology and Solidarity Economy.

The actions are being made in cycles of four moments each: collective planning, implementation, monitoring, evaluation of the results and lessons learned, that are being registered through images, notes and reports. The action-research also contributes to the clarity of vision that the exchange between university, local authorities and community should evolve naturally, without any notion of superiority, as far as everyone participates effectively into the movement and learn from each other.

Systemic Design, on its turn, is being used when, for instance, the recognition of local resources is being stimulated. One example is the internal production of composting as a fertilizer instead of relying on donations of cattle

manure from local authorities. Using composts would be more beneficial since it acts in the questions of adequate urban waste disposal and grow independency from external resources. It also analyses the variables that are involved and their relations, stimulates the practice of inclusion, stimulates the conscious agent and promote then the reinforcement of local networks. The recognition of the importance of inclusive means of communication, of the quality of its graphics project and of the variety of means chosen for the involvement of the community is also a contribution of Systemic Design.

The production, so far, is being shared mainly to the direct participants and the inhabitants who live nearby the garden. The idea, though, is to increase the production for a broader distribution. The latest challenges are being to improve the management system of the garden and to include more participants in its daily activities, to make the process more effective, diverse and inclusive. The directly involved group is still small and personal differences are making a significant impact in the system as a whole. The problems are being analysed using systemic planning tools such as network representation and causal loop diagrams.

7. CONCLUSIONS

This project is being an important academic practice, bringing to the participants new knowledges and contributing to the society with effective methods, tools and actions. It is being an opportunity of practicing diversity, exchanging empiric and academic knowledge, making a network among academic groups and among a poor community and the public administration, putting together three pillars of the society: community, academy and public administration.

Theories are being verified in practice. The systemic approach is proving to be necessary for the broader goal of creating a context of change to try and solve chronic problems of our society by means of the protagonism of the community itself, which is also one of the basis of the solidarity economy.

After two years of exchange between the participants of this network, changes have been materialized by the transformation of an area of geological risk to a productive community garden. Nevertheless, there is yet work to be done to make the cyclic production a reality, to stablish more harmonious relationship among the group directly involved and also to broaden the participating group. It is an ongoing process making the community to understand the possibility and the significant value of being autonomous. It requires behaviour, social and emotional changes which, in its turn, requires time, strong connections and the development of the local cohesion. On the broader picture, it is perceived that as the project move forward new local tools are being created for the participants to deal with their realities, and the dimensions of integral sustainability are gradually being considered in the context.

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