

# Social Technology and Incubation in Solidarity Economy and Creative Economy in Brazil

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**Abstract**— *The aim is to examine the relations between solidarity economy and creative economy, as well as social technology and the principles for incubation in solidarity economy and creative economy in Brazil. The main argument indicates that one of the main linkages between solidarity economy and creative economy comes from the stimulus both economies can give to the idea of “social technology”, which disseminated the concern with the technological bases of a process that would enable the recovery of the citizenship of the most penalized segments, the interruption of the trajectory of social fragmentation and internal economic strangulation of the country and the construction of sustainable development. The incubation of solidarity-based and creative enterprises can be seen as a process connected to social technology, since the development of science and technology can be associated with workers. It can also bring opportunities for pedagogical acts of formation and knowledge building through the practical and educational process of organization of these enterprises and be a university’s extension practice, which expresses the bond of the academic community with society. The incubation of solidarity-based and creative enterprises can also be a part of development strategies for impoverished territories. However, it faces constraints, such as lack of resources and personnel.*

**Keywords**— *Social technology; incubation; solidarity economy; creative economy; Brazil.*

## I. INTRODUCTION

The capitalist economy is characterized by a logic of competition, in which the winners accumulate advantages and the losers have disadvantages for the future disputes. To achieve a society in which equality among all members might prevail, it would be necessary for the economy to be solidary rather than competitive. The “solidarity economy” can only be implemented if it is organized equally by those

who associate to produce, trade, consume or save. The key to this proposal is the association between equals rather than the contract between unequals. In the prototype of a solidarity economy enterprise, there is no competition among the partners and, if the initiative progresses and accumulates capital, everyone wins equally. The idea of solidarity economy is connected to making society less unequal. It is an alternative mode of production whose basic principles are the collective or associated property of capital and the right to freedom (Singer 2002).

Another transformation takes place at the same time in which solidarity economy develops. The capital generated in the society is gradually based on people’s intellectual resources (Bendassolli et al. 2009), which can be seen in a set of diverse activities based on individual and collective talents or abilities, such as crafts, fashion, audiovisual and music, for example (Miguez 2007). These activities can be included into what can be called “creative economy”, which refers to activities that encompass the production, distribution and fruition of goods and services based on texts, symbols and images and activities guided by creativity, talent or individual ability (Jesus & Kamlot 2016). Creative economy highlighted the need for collaborative networks and models, as well as the development of new technologies to produce creative goods and services and generate creative content. These changes created possibilities for the generation of income and jobs, the extension of access to cultural goods and services and the promotion of social inclusion, especially in underdeveloped and developing countries (Reis 2008). It is possible to imagine that solidarity economy and creative economy have intersections regarding the promotion of socioeconomic development. Many enterprises in both economies sometimes need the support from incubators, based in principles such as cooperation, solidarity, respect for the environment and self-management.

In the Brazilian case, incubators which act in solidarity economy and creative economy allow the expansion of the relationship between political, economic and social actors to meet the population demands. Such incubators assist enterprises because they can provide support to self-organizing processes of socially marginalized groups and produce inputs for research, which builds learning processes and mobilizes multiple areas of knowledge and professional fields. They are distinguished from conventional technological incubators because they are based on principles such as social inclusion and popular participation. They do not only refer to the planning and management instruments designed by traditional companies. The incubation process encompasses economic, political, social and cultural aspects with the aim of developing more democratic and participatory forms of management that focus on workers' well-being (Addor et al. 2018).

The aim of the article is to examine the relations between solidarity economy and creative economy, as well as social technology and the principles for incubation in solidarity economy and creative economy in Brazil. The main argument indicates that one of the main linkages between solidarity economy and creative economy comes from the stimulus both economies can give to the idea of "social technology", which disseminated the concern with the technological bases of a process that would enable the recovery of the citizenship of the most penalized segments, the interruption of the trajectory of social fragmentation and internal economic strangulation of the country and the construction of sustainable development. The incubation of solidarity-based and creative enterprises can be seen as a process connected to social technology, since the development of science and technology can be associated with workers. It can also bring opportunities for pedagogical acts of formation and knowledge building through the practical and educational process of organization of these enterprises and be a university's extension practice, which expresses the bond of the academic community with society. The incubation of solidarity-based and creative enterprises can also be a part of development strategies for impoverished territories. However, it faces constraints, such as lack of resources and personnel.

## II. METHODS

The bibliographic research consisted of reading, selecting and organizing topics on the concepts of social technology, solidarity economy and creative economy and their intersections; the principles for incubation in solidarity and creative economies in Brazil and the main opportunities

and challenges presented by this process. The analysis of the results focused on the ways capacities for solidarity and creative economy are developed and stimulated by incubators and the main challenges they face in the process of incubation.

## III. RESULTS AND DISCUSSION

*Social technology, solidarity economy and creative economy*

Dagnino (2004) defines "technology" as the result of the action of a social actor on a work process that he/she controls. However, due to the characteristics of the context of the social agreement and the productive environment in which this social actor operates, the generated product may be appropriated by someone else other than this social actor. According to Feenberg (1999), technology is not neutral and it shapes or conditions lifestyles. It is also selected from a process permeated by the correlation of social and political forces that delimit the space of its consolidation (Feenberg 1999). The author proposes a subversive rationalization of technology to democratize the process of development, control and use of technologies and give greater human control over means and ends. This would be a way of extending democracy to the technical domain, democratizing the process of technological conception and application and going beyond the search for profit.

The concept of "social technology" disseminates the concern with the technological bases of a process that would enable the citizenship recovery of the most penalized segments, the interruption of the path of social fragmentation and internal economic strangulation of the country and the construction of sustainable development. Social technology is connected to a process of social innovation, which refers to the provision of some new good or service that results from knowledge – intangible, embedded in people or equipment, tacit or codified – whose objective would be to increase the effectiveness of processes, services and products related to the satisfaction of social needs (Dagnino et al. 2004). In opposition to conventional technology, social technology starts from a critique of the neutrality of science, and its construction considers the need to adapt the current technology to the construction of a society with new social relations of production. Social technology is characterized by social inclusion and the combat against exclusionary and segregating practices (Henriques et al. 2015).

The greater effectiveness and solidity of social technology can be attributed to a sociotechnical approach that takes into account the heterogeneous set of elements which are responsible for the transformation or

consolidation of networks they create – inventors, researchers, engineers, managers, workers, government and consumers, for example (Latour 1992) – and the social construction of technology, to the extent that consumer groups and political interests, for example, are considered to influence not only the final form that technology takes, but its content and application (Bijker 1995).

In this context, sociotechnical adequacy takes the form of a process of adaptation of scientific-technological knowledge not only to the requirements and purposes of a technical-economic nature, but to the set of socioeconomic and environmental aspects that constitute the relationship between science, technology and society. In defining a new sociotechnical code from which conventional technology would be deconstructed and redesigned in the direction of social technology, one can emphasize the democratic participation in the work process, the fulfilment of requirements related to the environment, the increase in the useful life of machines and equipment, the health of workers and consumers and their self-management training. In this “sociotechnical construction”, technological artefacts have their characteristics defined through negotiation between relevant social groups. This can be done by changing the way in which the surplus generated by the adoption of traditional technologies is shared, increasing the worker’s knowledge about the productive and managerial aspects and revitalizing and upgrading equipment, for example (Dagnino et al. 2004).

From this moment on, it is possible to see that one of the main linkages between solidarity economy and creative economy comes from the stimulus both economies can give to the idea of “social technology”. The solidarity economy is an autonomous way of managing human and natural resources so that social inequalities are reduced in the medium and long term. Its advantage is the rethinking of the relation to profit, turning all the generated work to benefit society, not just a portion of it. In a solidarity-based enterprise, the members may receive no salary, but have part of the financial benefits, which varies according to the income obtained. Members decide collectively in assembly how this can work, although there is a tendency to pay more for intellectual work than manual labor as a way not to lose the collaboration of more skilled workers. The assumption is that paying better technicians and administrators allows the enterprise to achieve larger gains that benefit all members, including those with smaller parts of the financial benefits. The extra money is usually placed in an education or investment fund (Singer 2002). The self-management may bring more conditions of possibility for social innovation and, with the participation of a diversity of members, the

impact of these innovations may bring benefits for the society as a whole.

The creative economy presents a broad sectorial aspect by bringing together to the new media and technologies elements of the solidarity economy that have relation with craft, arts and the traditional knowledge, for example. As a development strategy, creative economy recognizes the importance of human abilities and talent to foster the integration of sociocultural and economic goals and, in the light of the changing links between culture and economy with economic and technological transformations, it opens up a range of creative entrepreneurial opportunities, allows the formalization of small enterprises, promotes the generation of income and employment and increases the well-being of the population by stimulating the expression and participation of citizens in the cultural and political life. The intangibility of creativity can generate additional value to products by incorporating cultural characteristics inimitable by excellence and creating synergies between the lifestyle and the environment in which it flourishes. In addition, through social technology, creative economy broadens access to consumption and can define value-creating cultural niches that cross multiple networked sectors, such as handicrafts, antique shops and art fairs (Reis 2008).

#### *Social technology and principles for incubation in solidarity economy and creative economy in Brazil*

The incubation of solidarity-based and creative enterprises can be classified as a process connected to social technology, since the development of science and technology may be associated with workers (Dagnino 2010; Guimarães 2002). Solidarity-based and creative enterprises are, from this perspective, focused on the processes of production of goods and services as productive chains intertwine and become sustainable, and incubators can contribute to the modification of companies and groups of workers through technology. For such initiatives to be successful, it would be necessary to train professionals with the support of professors, researchers and undergraduate and graduate students, who would use their potential to generate innovations at the service of solidarity-based and creative enterprises and increase their capacity to develop in a sustainable way in economic, cultural and environmental terms (Leal 2018).

This type of incubation can also be understood as a pedagogical act of formation and construction of knowledge through the practical and educational process of organization of solidarity-based and creative economic enterprises (Singer 2002). This perspective, inspired by the

work of Freire (2013), points to the process of formation of working classes which are excluded from the market, so that incubation takes the form of a practical and educational process of organization and systemic monitoring of people interested in solidarity-based and / or creative entrepreneurship, generally in impoverished territories where they did not have access to institutions of academic and technical training for work. In this process, the knowledge accumulated by these people, as well as the fundamental knowledge about cooperative work and management and production techniques for insertion in productive chains and local arrangements, is valued. Incubators can mitigate their lack of training by providing technical support to incubated activities for the sustainability and autonomy of enterprises and qualifying the political, managerial, productive and commercial actions of these enterprises (Leal 2018).

In the Brazilian case, incubation may be a university extension practice, which expresses the link between the university and society in the fight against poverty and social exclusion and the interconnection between teaching, research and extension (Santos & Cruz 2008). The interdisciplinary of this process was emphasized by the Brazilian Ministry of Education, as well as by a strong link between the extension finance public notices and specific policies of public agencies. In this context, university extension activities began to be configured to articulate state and society through the higher education institutions (Leal 2018).

Incubation can also be conceived as a strategy for the development of impoverished territories (França Filho & Cunha 2009). In this perspective, incubation includes the territory of a given community as the place for intervention, in which multiple initiatives of an organizational, productive, environmental and cultural nature can be articulated and the flows of capital and income can be organized to regenerate the links and social solidarity and creative networks. In such networks, there are associative, cooperative and other experiences of collective and informal character that maintain more permanent relations with the market, articulate to public policies and construct autonomous exchange circuits. These circuits make possible the exchange of goods, services and knowledge among the enterprises. Cooperation enables the response to situations of insufficient access to productive resources and the fulfilment of market demands (Leal 2018).

The incubation of solidarity-based and creative enterprises can be based on the specialization of the fields of action. It can be directed to specific sectors in view of the institutional trajectory, the available resources and the field

of action of each incubator, such as cooperatives of recyclable material collectors and associations of family farmers in solidarity economy and enterprises that bring together artisans, artists and cultural producers in creative economy. Incubation can also be based on the methodological approach. It may only focus on the enterprise itself – expanding its management, technology, production and training capacities – or create territorial networks, which emphasize the interrelations between political, economic and socio-cultural actors. Incubation can be based on training related to specific subjects, usually of short duration, and assume a more technical profile. A generation-based incubation is divided into stages of institutionalization: first-generation incubators are the pioneers, which served as a basis for later incubations; the second-generation ones carry out expansion or replication processes; the third-generation ones are those originating from public policies. Finally, incubation based on origin can be focused on the logic of the success of the enterprise itself; the fulfilment of a function of the university in terms of teaching, research and extension activities or the creation of a channel for access to public policies for socioeconomic development, which makes these incubators assume a more executive profile and have greater capacity to operate large-scale projects (Leal 2018).

#### *Social technology and incubation in solidarity economy and creative economy in Brazil: main opportunities and limitations*

The main part of creative and solidarity-based incubators in Brazil is located in the Southeastern region of the country. In the case of solidarity economy incubators, most are in the interior of the federal states (65%), while the rest is located in capitals or metropolitan regions (Addor et al. 2018). In the case of creative economy incubators, many are still located in large urban centers, especially where there is a better infrastructure for artistic and creative services and activities (Jesus & Kamlot, 2016).

Creative and solidarity economy incubators still have a great dependence on federal, state or municipal public resources. Some are supported by universities and private companies, particularly creative economy incubators. Older solidarity-based incubators are able to diversify sources and attract the support from the private and the third sector, but the interruption of funding or the non-continuity of public notices motivate the de-structuring of many actions. One of the main impacts is the demobilization of incubation teams, mainly technicians and students, as well as the logistic difficulty of keeping visits in



the light of transportation and food expenses (Addor et al. 2018).

In the case of solidarity economy incubators, self-management continues as a horizon to be sought, since they provide collective functioning and decision-making experiences that enrich the trajectory of its participants. Self-management is created, tested, reformulated, and continuously improved. Among the most accomplished activities in the solidarity-based and creative incubation process, one can cite technical, professional and managerial qualification; advising on the planning and preparation and implementation of the business plan; technical and managerial assistance; project design and socio-political training. Other activities developed by the incubators include training courses, the organization of fairs and marketing spaces –which is very common for creative enterprises –, the production of pedagogical materials and technical manuals, the development of management tools and the support for political and institutional articulation (Addor et al. 2018).

In both solidarity-based and creative enterprises which are incubated, the work of incubators focuses predominantly on three points: the structuring of management and administrative practices; the development of productive processes aimed at improving their efficiency and the quality of life of workers; and the improvement of commercialization, fomenting spaces and articulations for the flow of the production of these enterprises. Much of this support is interrupted for lack of staff or resources; however, such incubators continue to be fundamental in the diffusion of solidarity economy and creative economy and the strengthening of support policies. This is because many of them have a range of institutional partners and become referrals in territories where they operate, fostering regional and local socio-economic development policies (Addor et al. 2018).

#### IV. CONCLUSION

For the development of incubation in solidarity and creative economy in Brazil to be more successful, more social research should be conceived and implemented in association with actions or solutions of collective problems, in which researchers and participants would be involved in cooperative and participative ways. This type of research could enhance the collective awareness of the participants throughout the entire productive process and show greater concern with participatory methods, in the light of the notion of “social technology”. The practical objective would be to contribute to a better possible equation of the problem considered as central in the research, with the indication of

solutions and the proposal of actions to help agents transform their actions. The goal in terms of knowledge would be to obtain information that would be difficult to access through other procedures and increase knowledge of certain situations (Addor&Alvear, 2015).

To promote the decent integration of workers into the labor market, it would be important to invest in polytechnic education, which seeks to provide the student with the acquisition of technical-operational knowledge and scientific and philosophical foundations that guide certain type of work. The notion of polytechnic education points to the overcoming between professional instruction and general education, in a way that contrasts with the traditional way through which capitalist society organized the educational process. Throughout the development of education in capitalist society, workers were limited to mastering the minimum of necessary knowledge to be efficient in the productive process, but without exceeding this limit. Vocational education had as its presupposition the fragmentation of work in autonomous specialties, so that workers must perform efficiently certain tasks required by the labor market, while scientific-intellectual education was intended for those who should design and control the process. In opposition to such a conception, the idea of polytechnic education postulates that the work process develops, in an indissoluble unity, the manual and intellectual aspects, in a way that indicates the contradiction that marks the capitalist society and the direction of its overcoming. Polytechnic education aims at putting the productive process at the service of the community in both solidarity and creative economies. When he/she dominates the foundations and principles of work, the worker would be able to develop the different working modalities and understand their character and essence (Saviani 1989; Henriques et al. 2015).

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