**Revista Organizações & Sociedade** - v. 26, n. 90, p. 513-534, jul./set. 2019
DOI 10.1590/1984-9260906 | ISSN Eletrônico - 1984-9230 | www.revistaoes.ufba.br

# THE SOCIAL TECHNOLOGY NETWORK: ANALYSIS OF THE ARTICULATION IN LIGHT OF THE SOCIAL MANAGEMENT CONCEPT

## A Rede de Tecnologia Social: análise da articulação à luz do conceito de gestão social

Marco Aurélio Cirilo Lemos*
Siegrid Guillaumon Dechandt**

## ABSTRACT

The so-called Social Technology Network was a network articulation that gathered more than 900 organizations (as NGO´s, Associations, and Cooperatives) that proposed to organize, articulate and integrate themselves with the purpose of promoting sustainable development through the diffusion and scale reapplication of social technologies. In light of the Social Management theoretical approach, the objective of this study was to analyze this complex articulation that lasted from 2005 to 2011. A historical survey was carried out and the analytical categories of territoriality and interorganization were adopted to understand the articulation. This exploratory, descriptive, qualitative-interpretative study mobilizes different data collection techniques and primary and secondary sources. As a result, we identified that more than R$ 430 million were invested in projects for the reapplication of 19 social technologies and R$ 8 million were invested in diffusing the theme and social technologies in general. In the process of interorganization, we verified the consolidation of two instances: the first one is the Coordinating Committee as a deliberative body, and the second one, the National Forums as a propositional channel for another 900 institutions. In spite of the enormous plurality, we concluded that the Social Technology Network was a movement that worked essentially according to the strategic objectives of the supporting institutions that were part of the coordinating committee. Regarding the process of valorization of territorial aspects, despite defining macro-regional areas of action, it was not possible to verify that it acted effectively in a context of local valorization and development.

**Keywords:** Interorganizational Networks. Social Technologies. Social Management.

## RESUMO

O objetivo deste estudo foi analisar de que maneira ocorreu a complexa articulação denominada Rede de Tecnologia Social (RTS) existente de 2005 a 2011, à luz do conceito de gestão social. Realizou-se um levantamento histórico e foram adotadas as categorias analíticas de territorialidade e a interorganização para o entendimento da articulação. Trata-se de um estudo exploratório qualitativo, descritivo, interpretativista que mobiliza diferentes técnicas de coleta de dados e fontes primárias e secundárias. Como resultado identificou-se que mais de R$ 430 milhões foram investidos em projetos para a reaplicação de 19 tecnologias sociais no Brasil, e R$ 8 milhões foram investidos em difusão do tema e de tecnologias sociais em geral. No processo de interorganização constataram-se a existência de duas instâncias: o Comitê Coordenador, como órgão deliberativo, e os Fóruns Nacionais, como canal propositivo de outras 900 instituições. Apesar da enorme pluralidade, concluiu-se que foi um movimento que funcionou essencialmente segundo os objetivos estratégicos das instituições mantenedoras integrantes do seu Comitê Coordenador. Quanto ao processo de valorização de aspectos territoriais, apesar de definir espaços macrorregionais de atuação, não foi possível constatar que atuou efetivamente num contexto de valorização local.

**Palavras-chave:** Redes Interorganizacionais. Tecnologias Sociais. Gestão Social.

* MA student in the Graduate Program in Business Administration of the University of Brasília (UnB) – Brasília (DF), Brasil. E-mail: marcocirilolemos@gmail.com. ORCID: 0000-0001-8318-6282

** Holds a PhD in Business Administration from the Federal University of Bahia (UFBA). Professor at the Business Administration Departmentof the University of Brasília – Brasília (DF), Brasil. E-mail: siegrid@unb.br. ORCID: 0000-0001-6369-3615

## 1. INTRODUCTION

From the perspective of social management, the legitimacy of decisions that effectively influence a collectivity must originate in the processes of discussion shaped by the incorporation of aspects such as social diversity, pluralism, participatory equality, autonomy and the common good, which is called "deliberative citizenship" (TENÓRIO et al., 2008). It is under this concept of participatory democracy and peer equality in achieving its objectives that the Social Technology Network (STN) emerged. The STN was an articulation of more than 900 network organizations (as NGO´s, Associations, and Cooperatives) whose aim was to gather, organize, articulate and integrate themselves with the purpose of promoting sustainable development through the diffusion and scale reapplication of social technologies, as the example of One Million Cisterns Program implemented in the Semi-Arid regions of the country.

The STN was the result of a provocation offered by the Communication Secretariat of the Presidency of the Republic at the ceremony of the 2nd Bank of Brazil Foundation (FBB) Award for Social Technology in 2003. The intention was for the reapplication of social technologies on a national scale to become a tool for elaborating public policies for social development. The STN articulation took place actively between 2005 and 2011. However, it was never legally formalized. As a result of the arrangements made within the coordinating committee, more than R$ 430 million were invested in projects for the reapplication of 19 social technologies. In this context, this study's main objective is to analyze how this complex articulation occurred in light of the concept of social management that will be presented later. The following specific objectives guided the study: to carry out a survey covering from the historical antecedents up to the closing of the STN articulation, and to analyze how the organization of the STN articulation presented evidence of social management as a process of interorganization and valorization of territoriality. This study also seeks to understand the particularities of the process of institutional articulation around a common social cause and its characteristics of interorganization in territorial complexity, considering the capacity for innovation and the financial magnitude of this experience.

The importance of this study lies in the evidence that only by empowering the citizens with the responsibility of constructing alternatives for themselves, along with mobilizing society and the state, is it possible to build solutions for so many humanitarian and territorial development challenges. The STN's experience in the social management of collective needs and demands proves to be a milestone in such experiences, in which a process of interorganizations was able to jointly discuss and propose responsibilities and solutions, making explicit the nature of efforts to improve and sustain society´s inclusive development.

## 2. SOCIAL TECHNOLOGY AND SOCIAL MANAGEMENT

Humanity develops through the knowledge that it accumulates. Adapting nature to the needs of human survival is called "technology". Social Technology is a sustainable development proposal that takes the user's social protagonism, environmental care and economic solidarity into consideration (FONSECA, 2010). The genesis of the thought that gave rise

to the understanding of the current concept of social technology occurred with movements in search of appropriate technologies in India. The ideals of Gandhi and other reformers peacefully objected the colonial pressures that forbade technological development based on traditional technologies originating in their own villages. These barriers and the subsequent restoration of traditional knowledge ended up contributing to disrupting that society's dependence on the British Empire (DAGNINO; BRANDÃO; NOVAES, 2004). According to Fonseca (2010), in the 1970s, there existed a movement to defend different unconventional technologies called 'appropriate technologies', which sought to give visibility to innovations located in the social tissues and directed to resolving specific territorial problems faced by those societies where the technologies emerged. However, that movement did not hold a critical view of the neutral, deterministic and instrumental theoretical perspective of technology, which did not consider the interested actors as part of the process - that is, which understands knowledge as something that could be "offered" by some and "demanded" by others (FONSECA, 2010).

Dagnino et al. (2004) emphasize that, just as it happened in Brazil, the absence of a legal and institutional framework was one of the reasons why initiatives related to appropriate technologies were not consolidated. This happened because those technologies were not targeted as a development project to be constructed or considered in terms of its conceptual and institutional basis, but rather, they occurred as unsystematic actions. They were considered ready solutions that could be replicated to solve similar problems without a more fruitful debate about the particularities of each user and the cultural relationship with their territory. In this scenario of conceptual gaps in technology criticism, the Critical Theory of Technology (FEENBERG, 2004) was developed. This theory addresses the technological matter as an intrinsically political and technoscientific development problem. Technoscientific neutrality means viewing technoscience as an unquestionable and always positive truth for the development of society (DAGNINO, 2008). The deterministic view defends technological development as an inexorable linear path, and technology as having an autonomous logic governed by efficacy and efficiency (FEENBERG, 2010). The presupposition of the critical perspective, on the other hand, is the democratization of these choices. The Critical Theory of Technology proposes rejecting historical assumptions about technoscientific neutrality and technological determinism. Thus, each technological evolution would represent a stage of social development.

Conventional technology, developed with a focus on private companies and the free market, is not the most adequate when seeking social inclusion because it is efficient in maximizing private profit but not in solving the interests of the social populations that are the most excluded from the developmental processes. For instance,

> conventional technologies are more labor-saving than would be convenient; have optimal, always increasing scales of production; are environmentally unsustainable; are intensive in synthetic inputs and are produced by large companies, and their production rate is given by machines that have coercive controls to decrease productivity (DAGNINO, 2004, p. 189).

When the objective of promoting sustainability is mobilized, the challenge is to choose a type of scientific-technological development that considers the local context of its

users and allows them to participate decisively in generating an effective process of social construction to solve their problems. In this sense, new rather than traditional technological models have been disseminated and practiced, such as social technologies.

Faced with the lack of academic availability of an appropriate conceptual framework, Dagnino et al. (2004) proposed the Sociotechnical Adequacy approach for Social Technology, clearly from the perspective of factories recovered by former workers' cooperatives. Technological justification is carried out based on democratic rationality and not technical rationality, as is the case with conventional technology. The second STA dimension concerns its ideological view, and this is intertwined with democratic rationality because it reflects the belief that scientific and technological knowledge must be directed or promoted toward sustainable development, i. e., concerned with meeting the social, economic, and environmental needs and the related consequences on these areas. The procedural dimension given by sociotechnical adequacy introduces the idea that

> [...] by transcending the static and normative vision of product and introducing the idea that social technology is in itself a process of social, and, therefore, political construction (not just a product), social technology should be implemented according to the given conditions of the specific environment in which it will occur (DAGNINO et al., 2004, p. 51).

Another concept mobilized for the present study is social management: "an alternative of social organization for achieving the common territorial good" (FISCHER, 2002, p. 29). According to Duque (2015), as is the case of the current consolidation of the concept of Social Technology, the concept of Social Management also emerged in the 1990s, with the political redemocratization in a new socioeconomic perspective. As Fischer and Melo describe, "Social management can be defined as being oriented to the social as a purpose and the social as a process, guided by the principles of ethics and solidarity" (2006, p. 17). According to Tenório (1998, p. 22), social management constitutes "the intersubjective process that presides over the action of citizenship both in the private and the public sphere". An important observation is the difference between the positivist tradition of the Scientific Administration's utilitarian rationality, which aims at the ends, either profit or effective public service, and social management, with its substantive rationality based on such values as solidarity in the pursuit of sustainable territorial development.

Social management seeks a way to emancipate the subjects through participation in the decision-making processes in which they are interested and are of public interest, wherein everyone has the right to speak without any type of coercion. In social management, "The determinant of their actions must be society and not the market" (TENÓRIO, 2010, p. 61). Social management is typical of territorially anchored processes as a form of representation of the local powers articulated in interorganizations. Two concepts are central to the understanding of social management: interorganization and territoriality. Interorganization is understood as:

> The development process [that] is mobilized by organizations working together or by interorganizations whose main characteristic is hybridization or complexity. Interorganizations are made up of differentiated organizations, connected by common purposes, or in other words, integrated. The association is made by complementarity-therefore, by the search for the different one that can cooperate so that a result can be reached. (FISCHER, 2002, p. 19)

This concept is similar to that of a network. However, it involves greater complexity regarding the differences that are complemented by the association through participatory and deliberative decision-making processes. In order to identify the main characteristic of deliberative participatory decision-making processes, Tenório et al. (2008) propose 21 criteria divided into six categories for evaluating such processes, as demonstrated in Table 1.

**Table 1** - Deliberative participatory decision-making processes

| Categories | Criteria |
|---|---|
| **Discussion process:** Discussion of problems through negotiated authority in the public sphere. This presupposes equality of rights and is understood as an intersubjective and communicative space that enables the understanding of the social actors involved. | - Broadcast Channels<br>- Quality of information<br>- Space of transversality<br>- Plurality of the promoter group<br>- Existing organs<br>- Monitoring bodies<br>- Relations with other participatory processes |
| **Inclusion:** Incorporation of individual and collective actors previously excluded from public policy decision-making spaces. | - Opening of decision spaces<br>- Social, political and technical acceptance<br>- Citizen valorization |
| **Pluralism:** Multiplicity of actors (public power, market and civil society) that, from their different perspectives, are involved in the decision-making process in public policies. | - Participation of different actors<br>- Profile of the actors |
| **Participatory equality:** Effective isonomy of action in decision-making processes in public policies. | - Form of representatives' election<br>- Speeches by representatives<br>- Participatory evaluation |
| **Autonomy:** Indistinct appropriation of decision-making power by different actors in public policies. | - Origin of propositions<br>- Attribution of actors<br>- Leadership profile<br>- Possibility of exercising one's own will |
| **Common good:** Social welfare achieved through republican practice. | - Objectives achieved<br>- Citizen approval of results |

**Note:** Adapted from Tenório et al. (2008, p. 11).

Tenório et al. (2008) also understood social management as communicative action (the Habermasian concept), which differs from the instrumental or strategic action of the systems. In the process of social management, truth exists only if all participants in the

social action in the public space admit its validity. That is, truth is the promise of rational consensus, or truth is not a relation between the individual and their perception of the world, but rather an agreement reached through critical discussion, through intersubjective appreciation between the different actors. The concept of social management is directly imbricated in the vision of local territorial development. Territory is the product of interactions between man and nature, and this is not necessarily due to a geographical continuation. For Fischer and Melo (2006, p. 27):

> The territory is a field of forces - that is, of exercising powers at different scales – it goes from the micro-local to the global. It refers to a delimited spatial scope – a neighborhood, a municipality, a region - and can be indicated by other names that suggest a certain inertia, stability and relative ordering. When defining a territorial outline, a strategic agency is assumed in this cut. That is, territory is concrete and a shape, but also indicates movement and interaction of social groups that are articulated and opposed regarding common interests.

Decisions taken through social management are appropriate for actions aimed at the development of certain territories. As Fischer (2012, p. 113) explains, "The senses and meanings of the social management of the development of territories can be understood in the contemporaneousness when the territory is considered as the origin and destination of the actions". Any technology for meeting human interests in man's relationship with nature and aiming at their well-being is directly dependent on the adversities imposed by each territorial reality.

## 3. METHODOLOGICAL ASPECTS

The aim of this study was to understand how the complex articulation called Social Technology Network occurred in light of the concept of social management. The intrinsic characteristics of the research point to a descriptive exploratory case study through which one aims to get familiar with a phenomenon or object of study that has not yet been mapped and has been little explored. The central characteristic of this research is its interpretative and qualitative nature, since it describes the existence of the STN, from 2005 to 2011. According to Vergara's typology (2007), this was a bibliographical, documentary and field research. Its documentary aspect refers to the investigation of public documents of the institution, such as the Constitutive Document, the History of the STN and other publications and reports of the STN's meetings and workshops, such as the one held in July 2004, and the National Forums I and II. For this documentary analysis, a critical and comparative reading of the chronological facts that occurred prior to its consolidation through news in traditional media and the ones disseminated by the participating institutions, such as the Bank of Brazil Foundation, the Ministry of Science, Technology, Innovation and Communications (MCTI), the Brazilian Oil Company (Petrobras), among others, was carried out. In addition to historical facts, this analysis allowed to highlight data and information on the diffusion and reapplication of social technologies.

In the field research, primary data were collected through semi-structured in-depth interviews with former representatives of the institutions present in the STN coordinating committee, according to Table 2.

**Table 2** - Identification of semi-structured interviews

| Identification | Institution | Function in Institution | Period in SRT | Institution in SRT |
|---|---|---|---|---|
| Interview 1 | ASA | Coordination | 2005–2011 | Network articulator |
| Interview 2 | FBB | Advisory | 2005–2011 | Supporter |
| Interview 3 | MCTI | Advisory | 2005–2011 | Supporter |
| Interview 4 | MDS | Direction | 2005–2006 / 2010–2011 | Supporter |
| Interview 5 | SEBRAE | Management | 2005–2011 | Supporter |
| Interview 6 | ABONG | Regional direction | 2007–2009 | Network articulator |

**Note:** Elaborated by Authors. Fieldwork 2016.

The interviews sought to identify the characteristics of interorganization and valorization of territorial aspects found in its form of management, as well as to gather information on the execution of diffusion and the reapplication of technologies. Table 3 presents the analytical map of the study.

**Table 3** - Analytical study map – Core concepts and analytical categories

| Theory | Category | Specific Objective | Source of Information | Collect | Type of Analysis | Indicator |
|---|---|---|---|---|---|---|
| ST | Diffusion | Identify ST diffusion | Document, reports and interviews | Reading and field | Documentary and discourse analysis | ST diffusion |
| ST | Reapplication | Identify ST replications | Document, reports and interviews | Reading and field | Documentary and discourse analysis | ST replications |
| SM | Interorganization | Identify aspects of interorganization | Document, reports and interviews | Reading and field | Documentary and discourse analysis | Interorganization processes |
| SM | Territory | Identify aspects of territorial valorization | Document, reports and interviews | Reading and field | Documentary and discourse analysis | Territorial performance |

**Note:** Elaborated by Authors. Fieldwork 2016.

## 4. SOCIAL TECHNOLOGY NETWORK

### 4.1 THE INITIAL ARTICULATION OF THE STN

The Federal Government of Brazil created the P1MC (Program 1 Million Cisterns) as a solution for the drought in its semi-arid region in 2003. This program had such characteristics as social technology, public and private resources, and management by civil society. The question then arose as to how to create other programs that, like that one, could ally the actions of the state with the participation of society. This scenario led to the implementation

of new poverty reduction policies with the commitment of popular participation, which created the opportunity to experiment with innovative policies for social inclusion and scientific and technological development at the national level (FRESSOLI; DIAS, 2014).

In order to scale up the pilot experiences, it was necessary, at the time, to develop new techniques and methodologies. In this context the STN articulation arises. After specific experiences from municipal and some state governments that provided rich experiences of greater popular participation in the public policy propositions, civil society seemed to gain a new status with a more active participation in Brazilian federal public management. Thus, the possibility of introducing the logic created in the Thematic Forums, the Management Boards and the Participatory Budgets in the sphere of the federal government emerged. According to Fressoli and Dias (2014), comprised mainly of social movements, non-governmental organizations and public institutions, such an articulation would be advantageous to the government due to its potential for creating challenges for the traditional monopolies of federal public policies. It would be a proposal of collective organization that could enable the democratization of technological solutions for sustainable development. Figure 1 below presents the chronological evolution of the STN's articulation with its main historical landmarks.

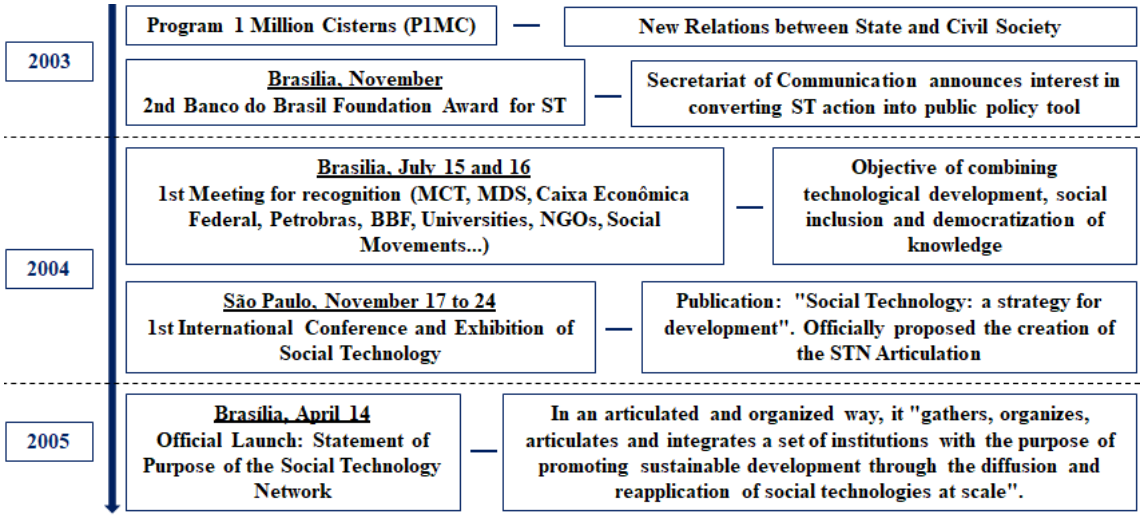


**Figure 1** - Evolution of the Social Technology Network Articulation.

**Source:** Elaborated by Authors. Fieldwork 2016.

During the 2nd edition of the Bank of Brazil Foundation Award for Social Technology, in November 2003, the leading minister of the (at the time) Presidency Secretariat of Communication and Strategic Management (Secom) publicly declared interest in advancing discussions that involved social technology, aiming to convert social technology into a tool for public policies. This information was confirmed in the document 'Chronology of the Constitution of the STN', as well as by the report of the Brazilian Support Service for Micro and Small Businesses (Sebrae) representative. In this favorable context, between November 17 and 20 of 2004, the 1st International Conference and Exhibition of Social Technology

was held in the city of São Paulo. Organized by the Bank of Brazil Foundation in partnership with the Brazilian Oil Company (Petrobras); Secom; the Ministry of Science, Technology, Innovation and Communications (MCTI); Sebrae; the Government Funding Agency for Studies and Projects (Finep/MCTI); and the Brazilian Agricultural Research Corporation (Embrapa). (DIMENSTEIN, 2004) The debate on the theme was broadened in that event with the participation of representatives from other countries that also worked with the logic of social technology. The study entitled "Social Technology: A strategy for development" was published during that conference. At the same conference, the STN was officially proposed.

The STN was formally launched on April 14, 2005, in Brasilia. The STN articulation was then defined in its 'Declaration of Purpose', which stated that "It gathers, organizes, articulates and integrates a set of institutions with the purpose of promoting sustainable development through the diffusion and scale reapplication of social technologies" (STN, 2005a, p. 1). The organizations that built the STN were committed to generating processes that would enable social changes in the country by encouraging sustainable experiences and empowering local actors and the exercise of shared management. It was decided that, from the perspective of its constitution, this network would not have its own legal personality, since its objective was to reapply technologies through the articulation of the actors that already applied them, albeit on a small scale (STN, 2005b). The STN's activities consisted of: disseminating knowledge about social technology, reapplying social technologies at scale, developing new social technologies in cases not yet available, and monitoring and evaluating the STN results (Interview 6, 2016).

The semantic importance in the differentiation between replication and reapplication of social technology had already been emphasized ever since the STN's inception. Unlike replication, reapplication emphasizes the importance of operating at scale, uniting the idea of reproduction with the appropriation and participation of the populations served. To that end, some conditions were considered: integrated interventions, evaluation as a prerequisite to reapplication, the existence of social organization in communities where social technologies were to be applied, and an incentive structure, which refers to public purchasing mechanisms, research funding, social technology certification and debate so that the idea could begin to become part of public policies. (STN, 2005a)

## 4.2. MECHANISMS OF DIFFUSION AND REAPPLICATION OF SOCIAL TECHNOLOGIES

Within the STN, it was understood that social technology diffusion involved the dissemination of technologies as if they were ready and established, not necessarily providing for the necessary local adaptations. The dissemination of specific models that acted as references for future reapplications occurred in printed or graphic form. Even so, it democratized technical knowledge for the solution of specific problems. Although it did not guarantee the collective adaptation to local characteristics, the social purpose of disseminating those social technologies was guaranteed (Interview 3, 2016).

The diffusion utilized mechanisms such as the STN Portal, the electronic newsletter "Notícias da Rede", the National Forum, regional workshops, the events carried out, the media workshops, the advisory services, and the media and printed publications of the institutions that integrated the Network and their (STN, 2011). The STN portal contained several

forms of information on social technology, including: publications, videos, news articles, projects, journal articles, interviews, history and the STN documents. The accesses to this portal jumped from 114 thousand in 2007 to 900 thousand in 2010. This evolution was credited to the dynamics of the portal updating 13 studies, 1 paper and 1 interview with an individual related to social technology, three times per week (STN, 2011).

Another important initiative was the construction of the Open Space that organized social technology records into 22 themes: family agriculture, communication, culture, knowledge democratization, local development, solidarity economy, education, energy, work and income generation, youth, environment, microfinance, housing, organization and strengthening of social capital, productive process, promotion of rights (gender, race and disabilities), recycling, water resources, sanitation, health, food and nutritional security, and assistive technologies/technical aids. Each social technology included in the platform provided basic information, including the main problem solved, the step-by-step application and a description of the most favorable environments for multiplying the experience, as well as the contact information for the institution responsible for recording the information (STN, 2011). In Open Space, over 30 social technologies were registered (Interview 2, 2016). The STN articulation invested a little more than R$ 8 million, funded by the institutions that maintained the STN, in processes that aimed to restructure the network, thereby diffusing the theme and the experiences of social technologies. For the reapplication of social technologies at scale, the STN contemplated the following actions:

> [...] to define the thematic focus for the STN action; to define the priority territories for the STN action; to identify the target communities' demands for social technologies and mobilize human and financial resources for their solution; to establish processes for selecting social technologies to be reapplied; to define criteria for selecting local partners to reapply social technologies in the prioritized territories; to seek partnerships or sources of funding for the reapplication of social technologies; and to ensure that any process of reapplication of social technologies that are supported by the STN promote the empowerment of reappliers and target communities (STN, 2005a, p. 7-8).

The STN operated as the focus of the supporters' investment in reapplying the social technologies agreed between the partners. It was incumbent upon each partnership articulated within the STN to formalize official and public relationships between the specific institutions of the action. According to Interview 3 (2016), "The reapplications were in the hands of the institutions, and, therefore, it was difficult to evaluate them. But even if it were for the STN to evaluate, there was no infrastructure for that". From 2005 to 2011, the STN applied R$ 435.7 million in actions for the reapplication of 19 social technologies. For the Legal Amazon macro-region, the investment of R$ 6.1 million was collectively articulated between the FBB, Petrobras, Rede GTA and Sebrae, within the STN. The investments were funded by individual instruments of each institution involved. The social technologies reapplied were: Socioparticipative Certification of Agro-Extractive Products, Meliponiculture, Community Management of Freshwater Shrimp, and the Partnership for Economic Reforestation.

For the macro-region of the peripheries of large urban centers, R$ 172.1 million were jointly organized among the institutions Caixa Econômica Federal, Finep/MCTI, the

MTE, the FBB, the MCTI, the MDS, Petrobras and Sebrae. These investments were executed through the individual instruments of each institution involved. The social technologies reapplied by these institutions were: Incubation and Support to Joint Ventures, Urban Support to Joint Ventures in Metropolitan Areas, Recycling of Solid Waste and Community Gardens.

In the semi-arid region, R$ 257.5 million were jointly organized among ASA, Caixa Econômica Federal, Finep/MCTI, BB Foundation, the MCTI, the MDS, the MI, Petrobras and Sebrae. These investments were executed through the individual instruments of each institution involved. The social technologies reapplied by these institutions were: Rural Development Agents, Integrated and Sustainable Agroecological Production, Cashew nuts Processing mini plants, Small Dams, the One Land and Two Waters Program, Community Banks, Araçuaí Sustainable Development, Incubation and Strengthening of Cooperatives, Rural Basic Sanitation, Extraction of Vegetable Oil with Total Use of the Product (babassu, carnauba, Brazil nut, and so on), Social Interest Housing and Income Generation.

## 4.3. THE SOCIAL MANAGEMENT PROCESS: INTERORGANIZATION, INCLUSION, PLURALISM, PARTICIPATORY EQUALITY AND AUTONOMY

The analysis of the characteristics of interorganization in the STN will be identified according to the first five categories for the evaluation of participatory deliberative decision processes elaborated by Tenório et al. (2008), namely: discussion process, inclusion, pluralism, participatory equity and autonomy. The Common Good category was not analysed, as this would require research to evaluate the achieved objectives of a considerably large sample, which was not feasible at the time. For the discussion process, it was highlighted by the interviewees that when the name "Network" was adopted, this decision was preceded by a great deal of debate about the type of organization that was desired so that those objectives could be reached. This interaction among so many organizations in so many sectors of the state, economy and civil society was something totally new because it brought with it a concept of another form of organization (Interview 5, 2016).

The STN's governance structure was designed and built to ensure network dynamics, and it was composed of the STN National Forum and the STN coordinating committee.[1] This structure was supported by the STN Executive Secretariat. The National Forums had an advisory and proactive character in managing the STN. Their proposals for action had to be

1. The STN Coordinating Committee: **Supporters:** Caixa Econômica Federal, Banco do Brasil Foundation (FBB), the Government Funding Agency for Studies and Projects (Finep/MCTI), Petrobras, Sebrae (Brazilian Support Service for Micro and Small Businesses), MCTI (the Ministry of Science, Technology, Innovation and Communications), MDS (the Ministry of Social Development and Fight against Hunger) and the Ministry of National Integration (MI) until 2011, The Ministry of Labor and Employment (MTE), through its National Secretariat for Solidarity Economy (Senaes); **Social Networking Organizations:** ASA (Brazilian Semi-arid Articulation), Abong (Brazilian Organization of Non-Governmental Organizations), the Amazonian Working Group (GTA) and the Ethos Institute for Business and Social Responsibility (in 2011, the Ethos Institute was replaced by Rede Cerrado); **An institution representing universities:** the Forum of Vice-Rectors of Extension of Brazilian Public Universities (Forproex); **An institution responsible for the dissemination of the STN**, through the production of communication products: Subsecretariat of Institutional Communication of the General Secretariat of the Presidency of the Republic.

deliberated in the coordinating committee. These forums were to be held annually or on an extraordinary basis with regional preparatory stages (STN, 2005a).

In practice, only two National Forums took place. The 1st STN National Forum took place in Salvador, Bahia between December 5 and 8 of 2006. A total of 258 people participated in this event. On that occasion, the topics discussed included: the development of the social technology concept; the STN history, results and challenges; social technology and sustainable development; social technology and the generation of work and income; social technology and public policies; network dynamics; strategies for the STN; and social technologies, experiences and interactions (STN, 2011). The 2nd STN National Forum took place in Brasília/DF between April 13-15 of 2009, in which 354 people participated. On that occasion, the topics discussed included: the STN's history; evaluation of the STN's actions; social technologies and regional development in each of the five macro regions of Brazil; agroecology and food safety; renewable energy; sustainable cities; water; agroextractivism; and social technologies: the potential for the reapplication of social technology and the generation of work and income (STN, 2011).

The STN supporters participated in the coordinating committee with up to four representatives of the social network articulators and a representative from educational, research and extension institutions, invited by the supporters. Its attributions were (STN, 2005a, p. 6):

a) Deliberating on the proposals of action presented by the National Forum;

b) Coordinating the activities of the Executive Secretariat;

c) Approving the budget necessary for the feasibility of the structure of the STN;

d) Articulating so that the STN proposals could be contemplated in the planning and budget of several governmental instances and partners;

e) Convening and organizing the STN National Forum;

f) Stimulating the development of new social technologies by the members of the STN in situations where they did not exist;

g) Coordinating and monitoring the other activities, including: the implementation of the STN Action Plan; the reapplication of social technologies by network members; the development and implementation of the STN's monitoring and evaluation system; the development, maintenance and management of the STN portal; and the process of diffusing the STN and its actions.

The Executive Secretariat provided administrative and operational support to fulfill the responsibilities of the coordinating committee. In addition, the STN Executive Secretariat monitored the execution of the work plans and stimulated the network dynamics (STN, 2011). The stimulus for network dynamics was given by the organization of the agenda. Socialization, preparation of materials and promotion of the debate and the socialization of information online was performed through the STN Portal. The STN Portal also sponsored the logistics for transportation, lodging and food in order to enable the presence of invited guests according to the topics covered (Interview 6, 2016). In order to find and exchange

experiences, disseminate knowledge and strengthen network dynamics, Regional and Thematic Workshops were proposed, based on needs and demands (STN, 2011).

The Regional and Thematic Workshops consisted of face-to-face meetings among representatives of the institutions of certain territories who were interested in deepening debates or exchanging experiences on a specific theme (STN, 2011). In 2006, two regional workshops (semi-arid and the Legal Amazon) took place with the objective of promoting increased mutual knowledge between the institutions, deepening the recognition of each one of them as members of the STN, and beginning preparations for the 1st National Forum, which occurred later that same year (STN, 2011). The first STN Communication Workshop was held in Salvador, Bahia on December 5, 2006. Its objective was to strengthen journalistic sources within the STN. Basically, two audiences participated in the meeting: press officers and representatives of the organizations generally interviewed by the media (STN, 2011).

**Table 4** - Institutions that were part of the STN

| Classification | Amount |
|---|---|
| Associations, NGOs or the Civil Society Org. of Public Interest | 546 |
| Consulates | 1 |
| Cooperatives | 37 |
| Companies | 67 |
| Elementary and Middle Schools | 7 |
| Foundations or Institutes | 110 |
| State Government Bodies | 12 |
| Federal Government Bodies | 23 |
| City Halls and Municipal Government Bodies | 53 |
| Trade Unions | 9 |
| Universities and Colleges | 63 |
| TOTAL | 928 |

**Note:** STN (2011, p. 4). Six Years STN Report: April 2005 to May 2011.

After the 1st STN National Forum, the priority was to hold thematic and state discussions based on the proposals systematized in the event with the perspective of connecting the network in the territorial localities (STN, 2011). The first major topic discussed in a public hearing at the Federal Chamber was intellectual property and social patent. Then, in the 2007-2010 period, the following themes were discussed in workshops: systematization of social technologies; networks; the social technology marketing network of recyclable materials cooperatives; social technology and solidary economy; the STN in Pará; the STN in the Amazon; the STN in Rio de Janeiro; the STN in Rio Grande do Sul; the STN in Paraná; the STN in São Paulo; and the process of revision and validation of the registry of social technologies in the STN portal – Open Space of Knowledge. In addition to these workshops, preparatory workshops for the 4th National Conference on Science, Technology and Innovation were held in the Brazilian states of Rio Grande do Sul, Rio de Janeiro, Bahia, Ceará, São Paulo, Distrito Federal, Mato Grosso, Paraná and Rondônia, as moments

in which the open knowledge area of the STN was shared. (STN, 2011) In six years, the STN was joined by 928 institutions from all regions of Brazil and other countries, notably, Peru, Colombia and Venezuela. The STN was composed of numerous types of institutions, as demonstrated in Table 4.

The diversity of institutions would guarantee conditions of inclusion and plurality within the STN. However, it would exercise its decision-making processes mainly within the coordinating committee, with its members deliberating on possible proposals or consultations with the National Forums. According to its constitutive proposal, the STN was supposed to be a space for consulting and for network articulation of solutions for social inclusion at the national level. The effective achievement of these objectives would occur through the articulation of resources from the institutions that maintained the STN, with the joint participatory decision of the articulators of social networks, which would represent each one of its members in the related themes and regions, and with academic support.

Although it came to constitute a network of more than 900 institutions, all those that did not make up the STN coordinating committee had little or no participation in the planning, prospecting and articulation processes (Interviews 2 and 4, 2016). These institutions, except for the coordinating committee, were not directly called upon to participate in the actions, nor were they legitimately represented in their local vision in the daily activities of the STN. The space designed to guarantee the participation of the other institutions in the network were the National Forums. However, these occurred only twice in the years of the STN's operation, and they apparently provided little consensus. For many of these institutions, their presence in these places – Salvador and Brasilia – would probably not be such a feasible task in terms of financial expenditures. Despite gathering such a large number of institutions in the social technology network, very few of these effectively participated in its decision-making process, and there exists little data on their effective proposals for action from their bases.

The STN was a movement that was strategically orchestrated by its supporting institutions and supported by information from the coordinating committee. The decision--making process for the definition and reapplication of social technologies often came as an indication of the supporters and not necessarily as the result of a local collective construction or of their representatives, that is, without necessarily consulting the territorial bases where they were intended to act (Interviews 2 and 4, 2016). This dynamic is evident in the fact that the choice of social technologies was made primarily by selecting a theme and reapplication goals to be reached according to the understanding of the coordinating committee, not the local actors.

The intention in the STN was precisely to scale the solution of problems in Brazil, on the order of millions. Thus, the STN should be a place for experimentation on a sufficient scale to prove the effectiveness of the public policy, which did not occur (Interview 5, 2016). It is for this reason that one interviewee affirms that there should have been an intention of an effective territorial approach rather than a concern for the quantity of the social technology scale, such as the Plate Cisterns' success in adapting to drought in the semi-arid region (Interview 2, 2016).

The field research revealed that the STN's decision-making process predominantly occurred among the maintainers, that exerted the power of their financial resources ac-

cording to strategic aspects that were particular to each of these institutions, despite the wide network established. The articulators of networks represented a very broad local vision within the coordinating committee, but they held little decision-making power regarding reapplications of social technologies funded by the supporting institutions (Interview 2, 2016). Due to its character as a resource mobilizer, the STN's actions were very much guided by the strategic objectives of the supporting institutions. Thus, although the representatives of those institutions were convinced to support a certain action, they were anchored in their institutional objectives.

This became evident when one of the interviewees affirmed that it seemed that some decisions had already been made, and if some institution had decided to invest in a certain reapplication, any contrary agenda would not make any difference. It was natural to have disagreements over certain actions in the network due to different interests, work and power disputes, however, it would not be natural to advocate a form of organization whose decision-making process was participatory and, in practice, to act differently. This kind of attitude eventually provoked significant conflicts (Interview 3, 2016). Another field source confirms this view by saying that dialogue and democracy were very superficial. Everyone could speak out, make their criticisms, and make suggestions on issues related to the agenda, structure and function, but resource decisions were very bilateral between the sponsor and the financed, except when it came to the operationalization of the Executive Secretariat and its maintenance (Interview 6, 2016).

It was reported that all representatives of the member institutions came from another matrix where, even in social movements, the forms of organization were always coordinated vertically with a political dispute for leadership. Additionally, according to the same interviewee, these situations in the STN did not occur due to the lack of dispute mechanisms with instances of power, because the internal organizational structure was based on horizontal articulation according to the network concept. However, this same interviewee later stated that the nine supporters (described at footnote 1) held great power of influence for defining which social technologies would receive resources (Interview 5, 2016). Another interviewee stated that, over time and as it grew, the actions of the STN were already well consolidated. However, some leaders had moved away, as the enchantment began to be replaced by the internal power disputes. When asked what powers were disputed, he claimed that it was a dispute for personal interests or the interests of the institution being represented, without being centered on the collective decision (Interview 1, 2016).

Field research revealed some consensus in the respondents' perception that the STN's goal was to be able to articulate and give voice to all participants. However, this was not fully reached. The STN's institutional decision-making processes were participatory, but a gap existed between activating, mobilizing, using intra and inter-institutional relations, and creating effective processes where collaboration and the network itself provided answers that were sufficiently collaborative and innovative (Interview 4, 2016). That way, it is noticeable that an instrumental rationality prevailed in the organizational environment of the STN, orchestrated by the interests and institutional visions of each one of the supporters, to the detriment of the substantive and communicative rationality. The opportunity to achieve the desired social development through the vision of those who live the reality on a day-to-day basis, represented by the 900 other partners who could manifest themselves in more participatory Forums and Meetings with greater decision-making powers, was lost.

According to Interview 4 (2016), this may have occurred due to lack of maturity in terms of acting as a network. Interview 2 (2016) suggests that the STN's error was its lack of articulation with the other almost 900 institutions that were part of the network, even affirming that it was eminently a movement of the coordinating committee. Despite forming a network with more than 900 institutions, all those that did not make up the coordinating committee had little or no involvement in planning, prospecting or coordinating. The information that subsidized the definition of which social technologies were to be reapplied at scale was constructed through the essentially strategic view of the supporting institutions that integrated the network, and not necessarily the result of local collective construction. Therefore, regarding the category of participatory equality and autonomy in the process of interorganization in the STN, full characteristics of the desired social management were not verified. Despite not reaching maturity in those categories, it is noticeable that the STN was a learning space on an alternative way of developing public policy to combat poverty with a view to strengthen autonomy and greater involvement of local actors, valuing their knowledge through the dissemination and reapplication of social technologies.

## 4.4. TERRITORIALITY IN THE SOCIAL MANAGEMENT PROCESS

The field research (2016) revealed that the STN's areas of activity were defined by the supporting institutions. The criteria included the specific interests of institutions that, based on the HDI (Human Development Index) and the great social inequality in comparison to the rest of Brazil, focused their activities on the North, Northeast and Center-West regions and on the peripheries of large urban centers (Interviews 2 and 3, 2016). As for how those demands were identified, the process started from a top-down practice of anticipating the demands and finally offering social technology. Thus, a social technology was proposed for a typical or characteristic challenge of a particular territory, usually not consulting the different actors in the network about the actual specific local demands (Interview 5, 2016).

From discussions and consensus building, territories with a high concentration of poverty were identified in 2005. These would become the focus for action of the whole STN articulation: the Legal Amazon, the peripheries of large urban centers, the semi-arid region and, as of 2009, the Brazilian Cerrado (STN, 2011). Based on the understanding that the generation of work and income provided a great alternative for the development of Brazil, and that it would be necessary to overcome the enormous inequality by increasing possibilities in the labor market, in 2005 the STN coordinating committee decided that the initial focus of investment in the reapplication of social technologies should be those social technologies that could foment work/employment and income generation (STN, 2011). This choice also occurred because the generation of work and income was an aggregating theme that would leverage other processes that contributed to social transformation in the most diverse areas (Interview 5, 2016).

At the 2nd National Forum, the network participating institutions pointed out new themes that could be included as the focus of the investment in reapplication. They were: the sustainable management of water and forestry resources; the production of clean energy and the permanent search for energy efficiency; food security and sovereignty through the sustainable production of organic food; the production of sustainable housing and infrastruc-

ture; the generation of work and income through sustainable businesses; and education and training (STN, 2011).

Although it had macro-regional areas of activity, it cannot be said that the STN acted in a context of territorial social management in its manner of conducting this local valuation perspective. A collective construction of solutions to be implemented to meet the real local demands was not identified. Thus, it cannot be said that the acknowledgement of territoriality for social management was fully developed in the STN.

## 4.5. THE SOCIAL TECHNOLOGY IN THE STN

The STN was set up with the mission of promoting sustainable development through the reapplication of social technologies at scale. By the ontology of the term scale, it denotes a strategic perspective in the structuring of its institutional objective. Scale production advocates the process in order to maximize the use of resources, focusing on low production costs to reach the desired goods and services. Adapting this essentially strategic perspective of efficiency to altruistic sustainable development may seem plausible given the extent of the social problems that have persisted in Brazil for a long time.

According to the current of Dagnino and his colleagues at Gapi-Unicamp, social technology values the experiences and popular knowledge in its associative and treasured form of local know-how as a result of an endogenous development. Self-management is the main concept related to social technologies, and is also umbilically linked to social management, as a participatory, dialogical and consensual process. While strategic management is eminently driven by the maximization of return on invested capital, social management is essentially concerned with the process of participation and autonomy of society in pursuit of its goals of common good. The practice of social management is essentially a process of social technology.

A certain degree of mismatch can be perceived when the prospect of a strategic scale action is heralded in order to reapply social technologies, albeit in the pursuit of sustainable development. In the ontology of the concept of social technology, valuing popular, local, and self-management aspects at scale is not an easy goal, given the singularity of each action. A good example of qualitative social work and impressive quantity seems to have been the P1MC, eminently conducted by the ASA, even supported by social technology. We considered that other studies can assess the level at which the STN reapplied social technology with self-management and technical empowerment, as the scope of the Common Good, more than reproduced ready solutions without dialogically deepening the origins of that precursor exclusion.

## 4.6. CLOSURE OF THE STN ACTIVITIES

As an inherent difficulty in the third sector, even due to the execution costs, accountability was also a weakness in the STN (Interview 2, 2016). According to Interview 5 (2016), the activities articulated by the STN were of institutional responsibility. The responsibility was attributed to the supporting organizations that had agreed to those understandings on

the scope proposed by the STN's coordinating committee. Thus, those supporters had the legal attribution of being accountable for the resources invested and the results achieved. In order to justify their actions and to influence public policies, the resource providers then had to provide some account of their results. The evaluation, however, focused on the numerical verification of the result achieved, rather than on social change and changes in the quality of life effectively produced by the social technology (INTERVIEW 1 and 4, 2016). As the resources available for carrying out an evaluation were scarce, the mechanism used for accountability had a quantitative focus (INTERVIEW 3, 2016). Respondent 5 (2016) clarifies that the proposal was, in fact, to gauge the number of TS replications, the number of beneficiaries and, eventually, the economic outcomes that the action could provide. This did not imply verifying the sustainable impacts resulting from the implementation of some solutions, which was a limitation of the evaluation.

During the years of its operation, the STN documented hundreds of cases of grassroots technology development and selected dozens that could be reapplied by the thousands in collaboration with funders, technicians, academics, politicians and civil society organizations on areas such as sanitation, agroecological production, social housing, solid waste recycling and so on (FRESOLI; DIAS, 2014).

The STN also contributed to the debate, in Brazil and elsewhere, regarding the need to combine endogenous development with social inclusion and the democratization of knowledge. This vision has become recognized and embodied in many social movements, NGOs and public policies. The organization involving such varied institutions helped to create spaces for social technology reapplication, and made it possible to overcome the formal organization, disseminating its ideals even to other countries and forms of institutional configurations. Fressoli and Dias (2014) claim that the STN's short history has raised questions about the best strategies in the search for grassroots innovation. Particularly regarding what the roles of the state, the funders and the agents of civil society should be, as well as how to combine the desire to expand solutions to overcome poverty situations with the aim of empowering social actors.

However, as in other initiatives involving the organization of civil society, it was not a trivial matter to coordinate so many heterogeneous institutions. The actors and institutions of the Brazilian STN, formed by different knowledge and practices, purposes and intervention spaces, represented an institutional challenge for all participants, as well as a limitation for some of their actors. As a result, the differences among social movements, NGOs and public institutions, and particularly the difficulties in finding an adequate institutional format for the network, all played an important role in the STN's discontinuation in 2012. At a certain point, changes in the conjuncture and in the directorates of organizations, and consequently, changes of interests and priorities, made it difficult to maintain the resource input that allowed the STN to achieve its purpose of reapplying social technology. In this perspective, and since the STN supporters were predominantly state institutions, the federal government transition between 2010 and 2011 had a major influence in determining the end of the STN (Interview 5, 2015).

It was perceived, through field research, that due to weaknesses such as those pointed out above, the STN could have achieved greater institutional sustainability if it had sought a more formal structure that would guarantee its continuation. However, that was

not the idea of its proposed constitution. When the need for institutionalization in order to strengthen linkages between institutions, to create contracts or to create agreements that could give greater longevity to the initiatives was discussed, many debates emerged. However, the Brazilian legislation does not contemplate the formation of an institution without a vertical structure – which, in the end, would elect a board of directors to legally represent the whole group, which would generate a natural power dispute. Thus, the proposal of being an informal network ended up contributing to this fluidity of the STN (Interview 5, 2016). This thought does not reflect the fact that the STN was an agglomeration of institutions with their inherent logics of management, whether public or strategic, that could not always be subjected to other management perspectives.

## 5. FINAL CONSIDERATIONS

This study's general objective was to analyze the way in which the complex articulation denominated 'Social Technology Network' occurred, in light of the concept of social management. To achieve this objective, it was necessary to carry out a historical survey of the STN activity and to identify its actions of diffusion and reapplication until the closure of its network activities. The articulation provided the investment of more than 8 million in processes aimed at the diffusion of the theme and of social technologies in general. For that, they created a website and printed publications, held several events and media workshops, and participated in other organization events.

In these same spaces, this conglomerate of public, state and third sector institutions gathered financial resources in the order of 435 million reais in projects for the reapplication of 19 different social technologies in the macro regions of the Legal Amazon, the peripheries of large urban centers and the semi-arid region. Among the reasons for early closure, we can highlight the institutions' great levels of heterogeneity and their lack of interactivity; impasses generated by such issues as their informal structure that depended on the interests of the institutions that directly influenced their financing; the state companies' bureaucracy, characteristic of its main constituent institutions; and a government transition that impacted many of the supporters in the last year of articulation.

The second specific objective was to analyze how the organization of the STN presented evidence of social management as a process of interorganization and valorization of territoriality. As for the interorganization process, the existence of two established instances was observed: the coordinating committee, as a deliberative body, and more than 900 institutions that had the National Forums as a channel. Despite having more than 900 institutions of enormous plurality, and, therefore, somehow inclusive, it was also concluded that the STN was a movement that worked essentially based on the decisions of the coordinating committee, carried out by the decision-making power of the supporters. In this sense, the prevalence of the utilitarian instrumental rationality in the management of STN was perceived, to the detriment of the substantive and communicative rationality proposed in the social technology concepts and social management itself, object of this study.

As for the process of valorization of territorial aspects in the management of the STN, despite defining macro-regional spaces of action, it was not possible to verify that the STN acted in a context of territorial management in the perspective of the valorization of the

local aspects. The definition of the STN's performance was based on a top-down vertical practice. Collective construction of solutions to be implemented in order to meet the local demands was not identified.

Even so, the STN was a learning space on social management through public policy with the use of social technologies. Not surprisingly, Duque (2015) demonstrates linking the two theoretical currents, when he states that social technology is a tool for the promotion of social management, since it allows the adaptation to each socioterritorial context and the creation of specific management environments. In this case, it was possible to perceive how the social management theory can be developed from the understanding of the filigrees of reality, including and refining the analytical categories that allow to identify the power logics inherent in the interorganizational relationship, the interpersonal relations and the different levels of understanding of deliberative citizenship. It is recommended, as a continuation of this exploratory research, that future research seek to understand, in more detail, how each of these processes of large-scale social technology reapplications occurred. Thus, such research should strive to adequately assess the amount invested and the legal instruments that support the transfer of resources for this type of social construction of technology. It is pertinent that the social results of these reapplications of social technologies at scale be evaluated, as well as the continuity of the actions following the withdrawal of the financial and institutional support of the organizations that maintained the STN in the projects articulated in the network.

It is hoped that other daring experiences like this will emerge in Brazil in a more organized and participative manner. The purpose of social management is that processes for the social development are developed and defined by the actors for whom such social transformation is intended. This kind of transformation is relevant to promote the inclusion of the excluded populations, reach a multiplicity of actors involved, provide participatory equality and autonomy of the proposed decision-making processes.

## REFERENCES

DAGNINO, R. P. **Neutralidade da Ciência e Determinismo Tecnológico.** Campinas: Editora da Unicamp, 2008. 279 p.

_____. A tecnologia social e seus desafios. In: LASSANCE, A.; PEDREIRA, S. **Tecnologia social:** uma estratégia para o desenvolvimento. Rio de Janeiro: Fundação Banco do Brasil, 2004. p. 187-209.

DAGNINO, R. P.; BRANDÃO, F. C.; NOVAES, H. T. N. Sobre o marco analítico-conceitual da tecnologia social. In: LASSANCE, A.; PEDREIRA, S. **Tecnologia social:** uma estratégia para o desenvolvimento. Rio de Janeiro: Fundação Banco do Brasil, 2004, p. 15-64.

DIMENSTEIN, G. Fundação organiza primeira conferência voltada para Tecnologia Social. **Jornal Folha de São Paulo**, Jornalismo Comunitário. 16 nov. 2004. Available at: http://www1.folha.uol.com.br/folha/dimenstein/noticias/gd161104f.htm. Accessed: 03 may 2017.

DUQUE, T. O. **Tecnologia Social e Gestão Social:** Interfaces e Conexões. 150 p. 2015. Dissertação (Mestrado) – Universidade Federal de Lavras, Lavras – MG, 2015.

FEENBERG, A. O que é a filosofia da tecnologia. In: NEDER, R. T. **A teoria crítica de Andrew Feenberg.** Brasília: Observatório do Movimento Pela Tecnologia Social Na América Latina / Cds / Unb / Capes, 2010, p. 51-65.

FEENBERG, A. **Teoria Crítica da tecnologia.** Texto original "Critical theory of technology". Tradução da Equipe de Tradutores do Colóquio Internacional "Teoria Crítica e Educação". Piracicaba: Unimep, 2004.

FISCHER, T. Gestão social do desenvolvimento de territórios. **Revista Psicologia, Organizações e Trabalho**, Florianópolis, v. 12. 2012.

_____. **Gestão do desenvolvimento e poderes locais:** marcos teóricos e avaliação. Salvador: Casa da Qualidade, 2002, p. 12-32.

FISCHER, T.; MELO, V. P. Gestão do Desenvolvimento Territorial e Residência Social – Casos para Ensino. In: FISCHER, T.; ROESCH, S.; MELO, V.N. (org.). **Gestão do desenvolvimento territorial e residência social:** casos para ensino. Salvador: CIAGS/UFBA. 2006.

FONSECA, R. Ciência, tecnologia e sociedade. Tecnologia Social e Desenvolvimento Sustentável: contribuições da RTS para a formulação de uma política de Estado de Ciência, Tecnologia e Inovação. **Rede de Tecnologia Social.** Secretaria Executiva da Rede de Tecnologia Social: Brasília, DF, 2010. p. 71-77.

FRESSOLI, M.; DIAS, R. **The Social Technology Network:** A hybrid experiment in grassroots innovation. STEPS Working Paper 67, Brighton: STEPS Centre, 2014.

STN. **Relatório de 6 anos da RTS:** abril de 2005 a maio de 2011. RTS. 2011. Available from: https://fbb.org.br/files/29/Rede-de-Tecnologia-Social/109/Relatorio-6-anos-RTS.pdf?preview=1. Accessed 04 jan. 2018.

_____. **Rede de Tecnologia Social.** Documento Constitutivo. 2005a. Available from: https://fbb.org.br/files/29/Rede-de-Tecnologia-Social/104/Documento-Constitutivo-RTS.pdf?preview=1. Accessed 04 jan. 2018.

_____. **Rede de Tecnologia Social**. Histórico. 2005b. Available from: https://fbb.org.br/files/29/Rede-de-Tecnologia-Social/105/Historico-RTS.pdf?preview=1. Accessed 04 jan. 2018.

TENÓRIO, F. G. Gestão Social: uma réplica. In: RIGO, A. S. et. al. (org.). **Gestão Social e Políticas Públicas de Desenvolvimento:** ações, articulações e agenda. Recife: Univasf, p. 53-59. 2010.

TENÓRIO, F. G. et al. Critérios para a avaliação de processos decisórios participativos deliberativos na implementação de políticas públicas. **Anais do Encontro De Administração Pública e Governança**, Salvador, BA, Brasil. 2008.

TENÓRIO, F. G. Gestão social: uma perspectiva conceitual. **Revista de Administração Pública**, Rio de Janeiro, v. 32, n. 5. 1998.

VERGARA, S. C. **Projetos e relatórios de pesquisa em administração**. 9 ed. São Paulo: Atlas. 2007.

Data de Submissão: 28/02/2017.
Data de Aprovação: 26/07/2018.