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## **The Incubator as Organizational Training Method**

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### **Abstract**

This paper presents a model of the cooperative incubator created in Brazil in 1995, whose aim was the creation of cooperatives, and not firms, in the classical sense. It was an initiative of the universities, directed at creating jobs for the marginalized social sectors, increasing their income, bettering their living conditions and providing educational opportunities. The Brazilian universities have always been concerned about the country's social inequality. The consolidation of this process through collaboration amongst industry, government, universities and civil society – the triple helix, has transformed this experiment into public policy.

**Keywords:** *incubator, cooperative incubator, triple helix*

### **Introduction**

The first Technological Incubator of Popular Cooperatives was established at Coppe/UFRJ (Graduate Program and Research Coordination in Engineering/ Federal University of Rio de Janeiro)<sup>1</sup>, in 1995. This was a time when a number of civil entities had come together in order to organize a series of activities to combat poverty. This movement called itself “Citizens in Action against Hunger and Misery and in favour of Life” (Ação da Cidadania contra a Fome, a Miséria e pela Vida). This movement started by a non -governmental organization – Ibase – encouraged solidarity and was organized in a decentralized and autonomous manner, with approximately 3,000 groups set up through local initiatives.

The precarious unofficial markets created in Rio de Janeiro – a mega-city within a developing country – have been losing their capacity to absorb all the workers seeking employment, from various different sectors, such as personal and domestic services and various types of odd jobs. A pyramidal occupational structure can be observed, with the service sector gaining predominance over the industrial sector – a phenomenon already witnessed in the developed countries – but with one major difference: the lower tertiary sector is swollen by the loss of mobility in the unofficial economy, leading to a fortifying of criminal tendencies and a fragmentation of the metropolitan social fabric.

It is within this context that the cooperative incubators attempting to fashion a new kind of worker who will take on the guise of a collective entrepreneur, linked with other

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<sup>1</sup> COPPE/UFRJ is a major graduate engineering school and research center. Besides ITCP, it shelters also a Technological Incubator and a Science Park.

workers in cooperative networks, associations and/or cooperative micro-enterprises, requiring the mastery of new information tools in productive environments. This methodology is attempting a new qualitative leap in the direction of fulfilling the processes of social and economic insertion (Bocayuva, 2000).

## **1. Method**

The approach adopted in the data collection for this study has been qualitative. This article is based on a review of the literature, analysis of the ITCP network's documents and interviews<sup>2</sup> conducted with incubator coordinators, federal government science and technology policy officials, and customers and members of the cooperatives, as well as participation in events organized by the incubators and their networks.

## **2. Invention of the model**

One of these groups, called “Committee of Public Bodies against Hunger and in favour of Life” (COEP - Comitê de Entidades Públicas no Combate à Fome e pela Vida), aimed to reflect on the social responsibility of public bodies and to mobilize these institutions to participate in this campaign. At this time, the idea of incubating cooperatives still hadn't been clearly formulated. The view was that the Federal University of Rio de Janeiro - UFRJ would carry out work similar to that being done by the Oswaldo Cruz Foundation (Fiocruz). This public health institute, supported by the federal government, ran a project called “Open University”, by means of which, through a local cooperative, it hired cleaners from amongst people living in the Manguinhos slum, that is located not far from the Foundation.<sup>3</sup>

From this initial discussion, the group decided on a different proposal: to utilize the university's potential as a fomenter of jobs rather than merely acting as an employer. The proposal was, in the manner that Coppe/UFRJ was already doing with technology based companies – to incubate projects based on the knowledge resources available at UFRJ, that would become tools for transforming the university's outreach efforts, directed at popular sectors that find themselves socially, economically, culturally and spatially marginalized<sup>4</sup>. The university received financial resources from COEP, an NGO, from Banco do Brasil Foundation and from National Innovation Agency (FINEP) (Guimarães, 1998).

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<sup>2</sup> Furthermore, the author analyzes the evolution of the Brazilian Incubator Movement in her PhD thesis, including the Cooperative Incubators, and worked for one year at the Technological Incubator for Popular Cooperatives at Coppe/UFRJ.

<sup>3</sup> This first contract involved providing cleaning services on the premises of Fiocruz, which was able to cut its cleaning bill, while at the same time increasing each worker's wages by 250%. Statement from Paulo Buss, Director of the National College of Public Health, in the book “Ossos do Ofício”.

<sup>4</sup> Statement from Prof. Luiz Pinguelli Rosa, Vice-Director at Coppe/UFRJ, in the book “Ossos do Ofício: cooperativas populares em cena aberta”, Rio de Janeiro, May 1998.

## 2. The development of Brazilian incubators

Incubators started to be organized in Brazil in the mid-1980s. Significant political and cultural changes were taking place in the country during that period: direct election of the state governors and the mayors of the state capitals, the campaign for direct election of the country's president, the end of the military regime, the appearance of new social agents, such as the MST – Brazil's Landless Rural Workers Movement, the first resistance<sup>1</sup> against the devastation of the Amazon forest, the organization of Afro-descendants communities to claim the lands where former slave havens were located. Taken as a whole, these manifestations signaled the advent of civil representation<sup>5</sup> in Brazil.

The military government that took power in 1964 continued to apply, in the Science and Technology (S&T) field, the same policies that had been adopted after the Second World War, directed towards national security, technological autonomy and the development of institutional infrastructure and human resources for the universities and state-owned companies.

In spite some good results were obtained in developing endogenous technology in fields like oil energy (off-shore technologies), telecommunications, informatics and aviation, the project of technological autonomy was circumscribed mainly to state industry in strategic sectors. The private sector, as a whole, was outside that project and wasn't benefited by transfer of technology from universities and public laboratories, without any R&D policy of their own and generally acquiring mature technologies from sources outside the country (Coutinho and Ferraz, 1995).

The military government came to an end in 1986 and the country returned to democratic rule. The reorganization of civil society allowed a whole new set of policies to be developed. In a climate of increased political freedom, following debate over the transfer of technology from universities to industry, it was proposed that incubators be established. As civil society learned to express itself and the bottom-up policy for creating incubators was consolidated, so different kinds of institutions became involved in the organization of incubators.

The emergence of this civil society space, associated with the S&T infrastructure build-up by the military regime propitiated conditions for the appearance of a huge incubator movement in a triple helix model of overlapping spheres.

In the Brazilian case, in a first move, academics, in alliance with officers from state and municipal governments, created technological incubators. Incubators were easier to be establish because fewer resources was required than were necessary to set up technology parks and the administration was less complex<sup>6</sup>. The first two incubators came into operation in 1986. One was collaboration between the university sector and the government of the State of São Paulo and was located in the town of São Carlos, where a technology park was in the process of being set up (Souza and Garcia, 1999).

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<sup>5</sup>Interview with the anthropologist Alfredo Wagner for the 'O Globo' newspaper, 'Prosa e Verso (Prose and Verse)' supplement, on February 15, 2003.

<sup>6</sup>Almeida, M. Interview with Maurício Guedes, director UFRJ Science Park on April 16, 2001.

The Technology Business Incubator was an integral part of the Florianópolis Technology Park project, an initiative of the UFSC – Santa Catarina Federal University and the government of the State of Santa Catarina (Cavagnari, 1987).

At the end of the military regime, industrial associations revived, as part of the renewal of civil society. This political change coincided with a crisis in employment, due to the laying off of large numbers of workers in medium and low-tech industries, as the Brazilian economy opened up to international competition. In response Industrial associations have applied the incubator concept to create firms in so-called traditional industrial sectors such as fashion, shoes, furniture and agricultural equipment (Fonseca and Kruglianskas, 2000).

New types of incubator emerged in the Brazilian incubator scenario in the decade of 1990s. The cooperative incubators, whose aim was the creation of cooperatives. It was an initiative of the universities, directed to create jobs. Initiatives like the incubators of cooperatives are the fruits of the reaction of the social movements to the unemployment problems of the early 1980's, which were aggravated by the opening up of the domestic market to imports after 1990 (Singer, 2002).

It was only towards the end of 1999, with the internet phenomenon already at its peak that private enterprise incubators started to appear in Brazil. These incubators are concentrated in the area of information technology, particularly in businesses involving the internet. Since the end of the year 2000, this segment has suffered the effects of the strong contraction of the internet market and in 2003, only five incubators of this kind were still in business (Botelho and Almeida, 2001).

Starting off at the universities, with expansion in the number of incubators determined by the initiatives of local social agents, the movement was organized at a national level by means of associations that, little by little, gained representativeness, as well as the respect and support of government and industrial sectors.

There are currently 318 incubators in Brazil, of which 155 are incubators of technology based companies; 55 for companies from traditional economic sectors; 51 mixed, for both technology based and traditional businesses; 41 for cooperatives, five cultural, three agribusiness, three social and five private.<sup>7</sup>

### **3. How the model works: role of the university in organizational training**

As examples of the experience in this area, we present below two case studies: the first involving the first cooperative incubator created, the ITCP/COPPE/UFRJ, based at the engineering research center in Rio de Janeiro, Brazil's second largest city; and the second focusing on one of the incubators set up through the transfer of methodology, INTECOOP, at the Federal University of Juiz de Fora, located in a large town in the south of Minas Gerais state.

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<sup>7</sup> <http://www.anprotec.org.br/arquivo-pdf/panorama%20final.pdf> accessed on June 20, 2005.  
<http://www.portaldovoluntario.org.br/site/pagina.php?idclipping=6509&idmenu=45> accessed on March 23, 2005  
Almeida, 2004.

### 3.1. ITCP/COPPE/UFRJ

The ITCP/COPPE is the pioneer in developing this kind of incubator and in the ten years that it has been functioning it has created 48 cooperatives, plus a further 13 that are in the process of incubation<sup>8</sup>, in response to the growing unemployment in Brazil. Its aim is to make a contribution towards the social integration of economically marginalized sectors.

The ITCP arose from an innovative concept. Although COPPE/UFRJ already had previous experience in technological incubation, it was necessary to develop new methodology, due to the unusual nature of the work. For this reason, a new methodology was created, modified and evaluated at the same time as the first cooperatives were being set up. As a result, the managers and staff, and also the members of the cooperatives themselves, went through a continuous learning process together.

The structure of this type of Incubator is unusual, while its headquarters are in the University campus; the incubated cooperatives have their own space, located in the very neighborhood where their members live. Incubated cooperatives pay no fee to ITCP. The process of incubating the cooperatives takes place within the community itself, and it is there that the specialists perform their continual monitoring of activities and provide legal, administrative, management and planning advice.

One of the first incubated groups was the Cooperativa Mista dos Trabalhadores do Parque Royal, created in December 1996, during the implementation of projects aimed at generating work and income, carried out by the municipal council (City Hall) of Rio de Janeiro in the Parque Royal slum. A group of local residents applied to the ITCP to set up a cooperative of seamstresses to operate in the clothing industry. This cooperative is in full operation today, participating in a group of 13 cooperatives, with 150 seamstresses, which do regular business with firms in the sector<sup>9</sup>.

Another cooperative, set up in 1997, the Cooperativa dos Trabalhadores do Morro da Mangueira Ltda, is in operation and working mainly in the area of hospital cleaning, through contracts signed with UERJ (State University of Rio de Janeiro). There are other components that work with garbage recycling. Researchers from the National Institute of Technology decided to provide technical support to this cooperative, developing new recycled product from Pet bottles<sup>10</sup>

The work of the Technological Incubators of Popular Cooperatives has been extended to organizing cooperatives among other marginalized social sectors. In some cases, it was necessary to adapt the original methodology. The first example occurred within the mental health system, with the creation, in 1996, of a cooperative at the Philippe Pinel Hospital in Rio de Janeiro – the Cooperativa Especial da Praia Vermelha. The idea came from discussions that took place at the 1996 State Conference on Mental Health.

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<sup>8</sup> Finep. 2005. Folha Inovação, nº 21, May, pp. 7

<sup>9</sup>[http://www.comerciosolidario.com.br/publico/cgi/cgilua.exe/sys/start.htm?sid=28&UserActiveTemplate=\\_br](http://www.comerciosolidario.com.br/publico/cgi/cgilua.exe/sys/start.htm?sid=28&UserActiveTemplate=_br), accessed on April 30, 2005.

<sup>10</sup> [http://www.canalciencia.ibict.br/pesquisas/pesquisa.php?ref\\_pesquisa=124](http://www.canalciencia.ibict.br/pesquisas/pesquisa.php?ref_pesquisa=124) accessed on April 30, 2005.

The concept involves combining the carrying out of manual work with productive insertion of the user, as part of their psychiatric treatment.

Following the privatization of many state-owned sectors, large numbers of workers lost their jobs, due to the restructuring of those sectors, and in 1999 their trade unions looked to incubators to organize cooperatives among these groups, which were then frequently sub-contracted by their former companies. And lastly, there has been the organizing of special cooperatives, such as those involving the operators of the prison and garbage collection systems.

In 2004, ITCP/COPPE/UFRJ was chosen to receive resources from the Infodev program, destined to extend the use of information technology among the cooperatives and to develop cooperatives in this field. The Dinamicoop was organized and directed towards teaching courses and selling services in the field of information and communication technology<sup>11</sup>.

In practice, the creation of a new working relationship – cooperative member instead of employee – has been observed in the cooperative incubators. This involves a process of learning to work in a group, discussion and development that needs to be encouraged by the organizers of the incubator so as to avoid the appearance of conflicts among the members. The tools that are utilized include periodic meetings and the setting up of a council of ethics in each cooperative, thus enabling the democratic discussion of the problems and difficulties that arise in the normal course of their activities<sup>12</sup>.

According to the nature of the activity performed by the cooperative, there may be a need for additional know-how, in order to perform the activity. For example, the cooperative COOPAMA (Cooperative of the Friends of the Environment) operates within an experimental waste treatment plant called Usina Verde located at the Rio de Janeiro Biotechnology Park and training is provided by the owners of the plant as well as by the incubator<sup>13</sup>.

### **3.2. INTECOOP/UFJF**

In the period from 1995 to 1999, the ITCP simultaneously concentrated its efforts in two main activities: (a) the development and experimentation of a suitable methodology to support cooperatives, grounded in basic education, the strengthening of cooperativism and the development of citizenship; and (b) the dissemination of the cooperative incubation concept among municipal authorities and other Brazilian universities. One of the outcomes was the INTECOOP/UFJF.

The Vice-Chancellor for Extension at the Federal University of Juiz de Fora invited the ITCP/COPPE/UFRJ coordinator to visit the university in 1997 and explain the concept of cooperative incubators. Subsequently, other meetings were organized to explain the methodology and how to organize the incubator. At this time, eight professors from

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<sup>11</sup> [http://www.cdi.org.br/boletim/boletim016C\\_site.htm](http://www.cdi.org.br/boletim/boletim016C_site.htm), accessed on March 24, 2005.

<sup>12</sup> Interview with João Guerreiro, member of the Coppe Incubator of Popular Cooperatives team, on October 28, 2001.

<sup>13</sup> Almeida, M. Interview with Luis Carlos Fernandes and Fabio Alves, members of COOPAMA on February 16, 2005.

different fields (economics, social services, history and journalism) decided to participate in the cooperative incubator activities.

The group decided to adapt the methodology according to the needs of local social groups. This incubator methodology comprises certain principles that guide the actions: group participation, democracy in decision making, respect for the knowledge of others, the construction of dialogue, the dialectic between 'what I know' and 'what the others know', and respect for popular culture. INTECOOP/UFJF uses an open model of action: while its headquarters are on the university campus, the incubated cooperatives have their own space, located in the very neighborhood where their members live.

At this university, the professors participate greatly in the incubator and the cooperatives. They take care of the specific demands of their technical area and advise the trainees: the production engineering professor handles the office layout; the architecture professors work on the visual identity of the cooperatives; the nursing professors take care of occupational illnesses; and the accounting professor looks after the cooperatives' accounting and taxation.

INTECOOP/UFJF is financed from the resources of FINEP (Funding Agency for Studies and Projects) and the Federal University of Juiz de Fora. The university has a scholarship programme to enable undergraduate students to work with the cooperatives. INTECOOP looks for students who are interested in giving service and applying their talents and knowledge to improving the lives of cooperative members. The students that work in the incubator are looking for answers to social questions, regarding misery and exclusion, and this experience helps them, as professionals, to be more sensitive to social issues.

The graduated cooperatives maintain an ongoing relationship with the Technological Incubator of Popular Cooperatives that allows the incubator access to the technical, administrative and financial information that serves them as a competitive differential. One example is Coopdef (Cooperativa de Portadores de Deficiências Ltda), one of the first incubated cooperatives, a group for the handicapped, who share special physical needs. It has been operating since 1998 and in 2005 has 330 participants, all of them working as office boys at government institutions. The subsequent monitoring takes place at the work venue or offices of the graduated cooperatives and involves discussing new contracts and planning<sup>14</sup>.

The profile of cooperative participants is generally the following: the associate members have a low educational level, are aged around 40, and are predominantly female (60%), and are unemployed or under-employed. The majority of them don't have professional skills. One such group is the Cooperativa de Matias Barbosa, whose participants know how to cook and decided to produce cookies and cakes<sup>15</sup>.

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<sup>14</sup> Almeida, M. Interview with Ana Livia Coimbra, Coordinator of the Technological Incubator for Popular Cooperatives at UFJF on July 2, 2005.

<sup>15</sup> Almeida, M. Interview with Ana Livia Coimbra, General Coordinator of the Technological Incubator for Popular Cooperatives at the Federal University of Juiz de Fora on July 2, 2005.

#### 4. The diffusion of the model

Ever since the first popular incubator was created by Coppe/UFRJ, various factors have stimulated other universities to organize this kind of incubator. In 2001, the mayor of Campinas asked Unicamp to create a Popular Cooperative Technological Incubator. The cooperative's field was to be: garbage recycling, school meals and street conservation<sup>16</sup>. At USP (SP) the Popular Cooperative Technological Incubator is considered to be a model of university action against unemployment and social exclusion, which is seen by those involved as a practical, theoretical and methodological challenge<sup>17</sup>.

The Technological Incubators of Popular Cooperatives began, in 1999, to organize their own national network, called the University Network of Technological Incubators of Popular Cooperatives (Rede Universitária de Incubadoras Tecnológicas de Cooperativas Populares – Rede de ITCPs). Its principal objectives are to stimulate intercollaboration and the spread of knowledge among the incubators and throughout the university environment; to encourage the development of similar incubators in other universities and to work towards the setting up, consolidation and integration of Popular Incubators affiliated to the network<sup>18</sup>.

This network is organized on a national basis, holds an annual general assembly, and produces an on-line newsletter in order to facilitate the exchange of information among the incubators.

There has been no tendency for the incubated cooperatives to organize themselves on an independent basis, but for the national assemblies each incubator generally tends to pay the participation expenses of one representative member of one of the cooperatives, in order to reinforce the level of interaction between them.

This initiative subsequently expanded to embrace 34 other not-for-profit universities<sup>19</sup> and has become an important means of extending the activities of Brazilian universities. There are 41 cooperative incubators in Brazil sponsored by universities, often with the backing of local government. There are 350 incubated cooperatives, which have generated a total of 8,000 jobs<sup>20</sup>.

A survey of the incubators and their enterprises is still under way, but the partial results, presented in Table 1, show the regional distribution of the cooperative incubators, the total and regional numbers of cooperatives and the total and regional numbers of cooperative members (i.e.: jobs created).

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<sup>16</sup> <http://www.preac.rei.unicamp.br/itcp/programa-itcp.htm>

<sup>17</sup> <http://www.cecae.usp.br/itcp> accessed on March 18, 2002.

<sup>18</sup> Interview with Gonçalo Guimarães, General Coordinator of the Technological Incubator for Popular Cooperatives at Coppe/UFRJ, February 15, 2001.

<sup>19</sup> Almeida, M. Interview with Teodoro Koracakis, Finep, on July 13, 2005.

<sup>20</sup> <http://www.portaldovoluntario.org.br/site/pagina.php?idclipping=6509&idmenu=45> accessed on March 23, 2005

**Table 1**  
**Regional distribution of Cooperative Incubators and cooperative economic activities**

Region	Number of Incubators	Number of Cooperatives	Number of Cooperatives Members
North	3	5 <sup>(a)</sup>	82 <sup>(a)</sup>
Northeast	9	21 <sup>(b)</sup>	601 <sup>(b)</sup>
Central-West	2	6 <sup>(c)</sup>	-
Southeast	17	82 <sup>(d)</sup>	1.975 <sup>(d)</sup>
South	10	34 <sup>(e)</sup>	1.453 <sup>(e)</sup>
<b>Total</b>	<b>41</b>	<b>148</b>	<b>4.111</b>

<sup>(a)</sup> The figures relate one incubator.

Source: [www.ufpa.br/cursoeconomia/extensao/relatorio\\_parcial\\_print.htm](http://www.ufpa.br/cursoeconomia/extensao/relatorio_parcial_print.htm) accessed on July 15, 2005.

<sup>(b)</sup> The figures relate three incubators. Source: Finep/Proninc, 2005.

<sup>(c)</sup> The figures relate one incubator. Source: Finep/Proninc, 2005.

<sup>(d)</sup> The figures relate nine incubators. Source: Finep/Proninc, 2005.

<sup>(e)</sup> The figures relate six incubators. Source: Finep/Proninc, 2005;  
[www.ucpel.tche.br/Intecoop/Intecoop.htm](http://www.ucpel.tche.br/Intecoop/Intecoop.htm), accessed on July 15, 2005.

The Table 2 presents the regional distribution of the cooperative economic sectors.

Region	Agricultural	Food	Clothing industry	Civil construction	Garbage recycling	Handicrafts	Services	Others
North	-	-	-	-	-	-	5	-
Northeast	5	2	6	1	3	4	-	-
Central-West	2	-	-	1	-	1	-	2
Southeast	15	11	10	2	10	13	18	3
South	4	1	3	-	16	4	1	5
<b>Total</b>	<b>26</b>	<b>14</b>	<b>19</b>	<b>4</b>	<b>29</b>	<b>22</b>	<b>24</b>	<b>10</b>

Sources: Finep/Proninc, 2005; [www.ucpel.tche.br/Intecoop/Intecoop.htm](http://www.ucpel.tche.br/Intecoop/Intecoop.htm), accessed on July 15<sup>th</sup>, 2005 and [www.ufpa.br/cursoeconomia/extensao/relatorio\\_parcial\\_print.htm](http://www.ufpa.br/cursoeconomia/extensao/relatorio_parcial_print.htm) accessed on July 15<sup>th</sup>, 2005.

The link between social incubators and universities makes it easier to bring together different social segments in support of the incubators. The universities help the incubators to maintain their independence from the government and also contribute to the participants' education by awakening their political awareness, in the broadest sense. The universities also help to disseminate this experience to other interested institutions (Pereira, 1998).

The university is the main cooperative's knowledge source. With the aim of providing access to knowledge for these groups, the universities have given courses on cooperativism and how to organize and register a cooperative. Another activity of the universities is to carry out feasibility studies for each cooperative, making use of the workers' knowledge acquired from their previous work experience.

This learning process involves the assimilation of new process and product technologies, as well as new institutional and cultural structures that facilitate cooperation among these new worker entrepreneurs. In order to make use of and develop the knowledge, skills and vocational leanings already acquired and utilize them in a variety of ways, a method of instruction is employed that integrates a critical awareness of the globalization process and its impact on the labour force with a transformation of the previous work experience (Bocayuva, 2000).

#### 4. Organization cooperatives challenges

Although there are methodological differences between the two incubators cited in this paper, the analysis of the difficulties encountered by both in each phase of the incubation process will be presented together, with any specific differences pointed out where appropriate.

##### 4.1. Selection of the cooperatives for incubation

At the ITCP/COPPE/UFRJ, the selection of cooperatives for incubation is carried out by an *ad-hoc* committee of outside experts in a public process that confers transparency to the procedure. The notification is broadly disseminated, through correspondence with a variety of social organizations (trade unions, resident's associations, NGOs, etc), inviting them to recommend groups that may be interested in setting up a cooperative. When they register, among other information, each group will state the number of participants, the address and the intended economic activity. Interviews are carried out with each of the interested groups, in order to assess the level of maturity of the proposed activity and the organizational preparedness of the group for collective labor<sup>21</sup>. The INTECOOP/UFJF intends to adopt the same procedure for its next selection process. Up till now, groups have been chosen through weekly meetings held to publicize cooperativism or through the recommendation of other civil society organizations. The assessment of the groups is similar to that outlined above.

##### *Pre-incubation*

This phase begins with an evaluation of the participants' skills, previous professional experience and educational levels, together with an assessment of the venture's economic and financial feasibility. They are encouraged to organize their basic civil documentation (ID Card, Taxpayer's Registration [CPF] and Voter Registration). The awareness, motivation and preparation of these groups, in terms of organizing themselves into cooperatives, are assessed and discussed with the participants, as difficulties sometimes arise over getting together to define the type of undertaking to pursue, thus affecting whether or not they remain with the incubator.

##### *Incubation*

During this phase at the ITCP/COPPE/UFRJ, two courses are held for all the group members<sup>22</sup>. The first is "An Introduction to Cooperativism", addressing issues such as what is a cooperative; the principles of cooperativism; self-sustained management and business ethics. The second is "The Cooperative as a Business", which aims to broaden the knowledge about how a cooperative works and especially about the products/services to be offered, the preparation of cost table and a list of the equipment needed. These courses lead to a refining of the initial project for the enterprise.

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<sup>21</sup> Almeida, M. Interview with Paulo Leboutte, member of the Coppe Incubator of Popular Cooperatives team, on February 16, 2005.

<sup>22</sup> Computer courses are available to the participants at the ITCP/COPPE/UFRJ, covering text editing, the preparation of spreadsheets and access and utilization of the Internet (30 hours), so as to encourage them to use computers in their work. Almeida, M. Interview with Paulo Leboutte, member of the Coppe Incubator of Popular Cooperatives team, on February 16, 2005.

A procedure known as “Support for the legalization of the cooperatives” is conducted right from the start of the incubation process, involving the discussion and preparation of the legalization documents: by-laws; charter; records of the meeting that approved the founding of the cooperative; formal approval of the charter; formal approval of the organization of the social funds<sup>23</sup>; and election of the board and statutory audit committee. In this way, the enterprise will be formally registered with the responsible federal, state and municipal authorities and will be able to operate as an official business.

This incubator also helps to insert the cooperatives within the market: in making contact with new customers; preparing work proposals/estimates/equipment certification/quality management/work safety norms; organizing the work and controlling the quality of the services/products provided, in order to improve the cooperative’s methods/processes.

Following the first step, of defining and formally legalizing the venture’s economic activity, there is day to day monitoring of operations. Another important feature is the professional training of the workers, which aims to stimulate discussion of issues such as work and a caring economy; democracy, participation and citizenship; cooperatives, associations and supportive networks; planning and management. The INTECOOP/UFJF is equipped with pedagogical support materials (educational booklets and videos). The process of incubating the groups includes addressing the economic aspects of the enterprise in a way that is linked to its social character.

The work with each enterprise goes through the following stages: evaluation of the venture’s stage of productive and administrative development; training of the members in cooperative entrepreneurship, planning and management; development, as a team, of the group’s strategic planning and business plan, with the aim of obtaining third party resources for the expansion and consolidation of the undertaking.

At both incubators, these activities are carried out by students under the guidance of a social worker and, when necessary, of a lawyer and an accountant. The greatest problems encountered during this phase are: a) the number of cooperative participants, since Brazilian legislation requires that a cooperative has a minimum of 20 participants; b) lack of personal documents; c) doubts regarding the Credit Protection Service; and d) the financial expense involved in the legalization process. The duration of this phase depends on the group’s capacity to gear up to the challenge and some are able to get through it quickly, while others get bogged down and end up quitting the incubation process.

Inserting the cooperatives into the market is another challenge for the incubators, which encourage the participants to seek out potential clients and help them to prepare work proposals and define their prices. When the cooperative quickly manages to attract its first client this facilitates the learning of administration, accounting and management<sup>24</sup>, since these functions take on a tangible form. Some cooperative members, who were

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<sup>23</sup> Interview with João Guerreiro, member of the Coppe Incubator of Popular Cooperatives team, on October 28, 2001.

<sup>24</sup> Courses on accounting, the drawing up of minutes and the functions of the audit committee are provided for those cooperative members who are responsible for these activities.

previously self-employed, are unable to adapt to working in a team, with defined functions, hours, etc. If they leave the cooperative for this reason then they are replaced.

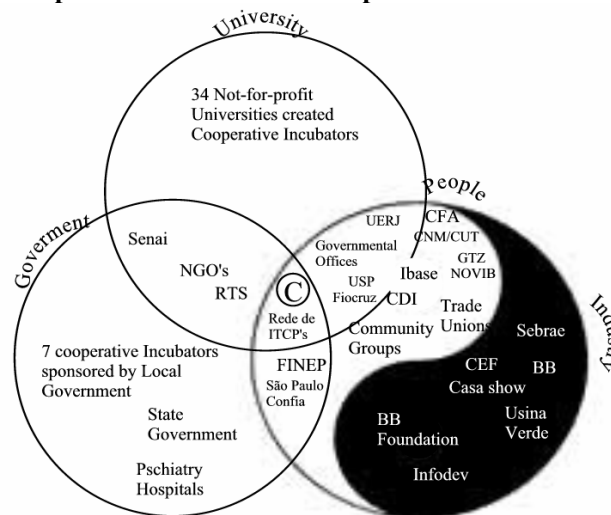
Other problems that arise during this phase are generally related to the democratic management of the enterprise, with authoritarian attitudes on the part of the management not being tolerated by the members, who seek the help of the incubator in order to reorganize and replace the managers concerned.

#### 4. Cooperative Incubator and the Triple Helix Model

The incubators of cooperatives adopted a strategy for developing a network of support. This enhanced their feasibility and financial support, as well as facilitating the incorporation of the incubators and their cooperatives within the activities of the universities.

In the analysis of the cooperative incubators, based on the Triple Helix Twins Model (Etzkowitz and Zhou, 2006) is presented at the Figure 1.

**Figure 1-  
Cooperative Incubator and Triple Helix Twins Model**



**CNM:** Metallurgist National Confederation; **CUT:** Workers Union;  
**COEP:** Committee of Public Entities in Action against Hunger and in Favour of Life  
**Senaes:** National Secretary of Solidarity Economics; **BB:** Banco do Brazil  
**Senac:** National Commercial Training Service; **CEF:** Federal Savings Bank  
**Sebrae:** Brazilian Micro and Small Business Support Service  
**Senai:** National Industrial Apprenticeship Service; **FIOCRUZ:** Oswaldo Cruz Foundation  
**Finep:** Projects and Studies Financing Agency; **RTS:** Social Technology Network  
**Infodev:** The Information for Development Program; **USP:** São Paulo University  
**CDI:** Committee for Democratization of the Information Technology  
**GTZ:** Deutsche Gesellschaft für Technische Zusammenarbeit  
**NOVIB:** Oxfam Novib; **UFRJ:** Federal University of Rio de Janeiro

The university becomes the source of knowledge for groups that do not possess formal access to this institution, which assumes a similar role to that adopted regarding technological incubator firms, with a differentiation in the content of the knowledge transmitted to the incubated cooperatives. Moreover, the university's social responsibility is channeled in the direction of reducing inequality and increasing social inclusion.

Other actions are included, as a result of triple helix recursive effect in function of the relation established with the other spheres, as well as of the recursive effect of the own performance of the university: professors and researchers supply specialized advising to the cooperatives; incubators financial management; search of mechanisms of credit for the incubated cooperatives.

In the industrial sphere, action relating to its own area of activity may be noted: financial support for the incubators<sup>25</sup>; the passing on of specialized knowledge to the cooperatives<sup>26</sup>; the use of new support mechanisms, such as the principle of social responsibility, to help in setting up new cooperatives<sup>27</sup>; participation in specific partnerships for the organization of new cooperatives (Etzkowitz, Mello and Almeida, 2005).

Municipal and state governments have established partnerships with the ITCPs, in order to organize cooperatives, so as to provide an alternative to unemployment or the informal job market for excluded sectors or socially disadvantaged groups.

In addition to incubating popular cooperatives, ITCPs also perform two other main activities: they participate in the development of public policies regarding cooperativism, and they dedicate themselves to cooperative education. With respect to the former, ITCPs fulfil the role of consultant or advisor to state governments in the conception and implementation of public policies directed to fostering economic development involving the social and economic insertion of the poor.

In 2003, the National Cooperative Incubator Program (PRONINC), organized by FINEP in 1995, was expanded, with the aim of providing support to this kind of cooperative sponsored by Brazilian universities. New resources were approved for 33 incubators in 2004/2005, supported by the following partners: Banco do Brasil, Banco do Brasil Foundation and the National Secretariat for Economic Solidarity, within the Labor Ministry of the Brazilian federal government (Secretaria Nacional de Economia Solidária - SENAES)<sup>28</sup>.

These incubators in general keep a relation with institutions to the civil society and establish partnership with trade unions partnership for cooperative creation among the dismissed metallurgist in ABC region (REDE DE ITCPs e UNITRABALHO, 1999), or with NGOs.

## **Conclusion: implications for other developing countries**

Analysis of the incubator experience in Brazil points to the following conclusions:

The Brazilian incubator is a creative reinterpretation of a model imported from an advanced industrial society and the process of implementation reflects the local problems and opportunities.

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<sup>25</sup> Sebrae.

<sup>26</sup> Sebrae, Senai, Sesi, Senac (ITCP network, 2001).

<sup>27</sup> Eletrobrás (ITCP/Coppe/UFRJ, 2003).

<sup>28</sup> <http://www.acompanhamentoproninc.org.br/historico.htm> accessed on June 20, 2005.

Incubation evolved from the original model, with the objective of assisting the creation of high-tech firms by universities, in order to raise the technological level of low-tech industries in traditional sectors, create employment opportunities for marginal populations and, very recently, as a mechanism to create non-governmental organizations (NGOs) – local organizations dedicated to the protection of natural resources or to cultural and artistic ventures.

A considerable benefit from the taking off of the Brazilian incubator movement has been the mobilization of civil society and institutions from the triple helix in support of the project. The National Incubator Association (Anprotec) was set up to share experience, help to raise the quality level, gain respect from the authorities and spread the movement throughout the country.

The cooperative incubators provide targeted support to a small select group, often having only a marginal effect on the huge problem of unemployment. Nevertheless, if the cooperative incubators form part of a public policy to fight poverty that includes other support programs, addressing credit and education, the combined results will help to expand the local economy.

The cooperative incubators are a mechanism that enhances social capital, democracy and self-government among their members and this leads to the development of citizenship and of society itself.

The establishment of cooperatives was intended to strengthen the existing social capital, in order to encounter solutions for the marginalized social sectors. Consequently, the incubator has collaborated in breaking the cycle of social fragmentation and labour market precariousness, with its cultural components of marginalization and criminalization of this element of the population.

That is all I have to say for the moment. If you have any questions, I will be pleased to answer them. Thank you very much for your time and hospitality.

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