COMPLEX NETWORKS AND PUBLIC MANAGEMENT OF COMMUNITY ENTERPRISES TO ASSIST THE POPULATION: THE CASE OF THE HEALTH CENTER JARDIM BOA ESPERANÇA, IN CAMPINAS, SP, BRAZIL

Cite

Authors: de Carvalho, José Maria Lopes | Sobrinho, Fuad Gattaz | Pacheco, Oscar Ivan Palma | Gonçalves, Caio Márcio | de Argollo Ferrão, André Munhoz

Affiliations: Department of Water Resources, School of Civil Engineering, Architecture, and Urbanism, State University of Campinas, Campinas, SP, Brazil | FAH - Adventist College of Hortolandia, CES, Hortolandia, SP, Brazil | Department of Water Resources, School of Civil Engineering, Architecture, and Urbanism, State University of Campinas, Campinas, SP, Brazil

Abstract: The development of mankind is undoubtedly a succession of problems and solutions. Regarding health, control and treatment of endemic diseases and other illness represent the effort of mankind in the pursuit of well-being and greater longevity. The social organization appears as an element of contemporary society and as a shared solution of health problems. A health policy is a complex process that involves many factors, public and private. Initially, it is sought to assist the population of a given area or region. This study aims to demonstrate the (non) use of the principles of processes in conducting a public health policy. Hence, we present the Health Center Jardim Boa Esperança and the effort to build new facilities and to improve the quality of assistance to the people of its surroundings. However, the context shows that the exclusion or lack of commitment of a factor can slow down the process. The methodology used was the action research, from a process modeling in evidence. The comparison of the process principles of reality was crucial to include new factor and implementation of the reform and improvement in the quality of assistance to the population can be realized.

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1 Introduction

Health Facilities are organizations that represent psychosocial systems very different from other types of organizations. Unlike what happens in the other organizations, in Health Facilities there is daily and direct familiarity with pain, death, joy and difficulties of other people. To Gonçalves (1987), the health system is a complex psychosocial system, where the raw material and the product are human origin, the work is mostly done by human and its goal is also human - direct service provided to people.

The provision of health services in Brazil has changed substantially since the 1960s. The 1980 decade resulted in deep changes in the environment and in the health organizations, due to the near collapse of public health, to value and access to services, to technological advances, and especially, to the emergence and strengthening of a link that did not exist in the

process: health insurance, responsible for a wave of changes that affected the entire industry. These changes increasingly pressured health organizations to increase the quality of services - which certainly implies improving these services.

Minimally, a public health system can be seen as a process where there is involvement of some factors, namely:

    i.   users, which is the population of the city that utilizes the services of public health;

    ii.   professionals, who are the those who work in various units of user service and,

    iii.   managers, people who participate in the management or administration of the several service units.

The user expects to receive adequate care, considering the wide variety of demand. The user also expects the service to occur on time and according to what is expected. The health professional, in turn, is a provider of services, is a specialist. They are doctors, dentists, nurses, health assistants, physiotherapists and speech therapists, and other professionals. Managers are responsible for organizing and controlling the activities of the health system. It involves the public servants staff, whether hired or not, with the direct and indirect participation of the municipal government, secretaries and administrative staff.

Given the development model in Brazil, there is a process of sectorization or regionalization of public health services the complexity of the public health apparatus led to its division into districts and a progressive decentralization of planning and management for areas with about 200,000 inhabitants. Initially, the process happened by primary care services, followed by secondary services, and subsequently, by the insured or contracted services.

The public health system in Campinas [SP] faces several problems, as lack of qualified staff, essential medicines to the population, and even inadequate facilities. The conditions of public health in Campinas do not have the best rates when compared to developed countries. The system lacks credibility, either by users, professionals or managers.

A good instrument to measure the conditions of the current public health system is to verify its use (or lack of it) by users and professionals. Users only utilize the services of public health because they have no alternative, mainly due to financial issues. If they had money to pay for a private health insurance, they would have certainly done it. Professionals and managers, with few exceptions, have particular services because they do not believe in public health services. So, the core lies in the following question: Who would use a health service, if not even who works in it believe in it? The motivation of this Study is the search for improved conditions to the population's assistance of the Health Center Jardim Boa Esperança, in the city of Campinas.

Politics is the art of creating conditions to make possible what is needed and to build forces capable to modify reality, making possible a better day in the future that today seems impossible (CARDOSO, 2012; HANECKER 2012) The vision of both is incorporated here, in order to build an efficient work to help the public community, *in totum*. This Article shows

that, if using politics and the process cited, a value can be achieved, represented by the improvement of the assistance conditions of the Health Center Jardim Boa Esperança, in the city of Campinas [SP], as a study case.

2 Theoretical

The approach of this Article flows into the development process, specifically to solve a complex problem: public health. Public health can be understood as a system, a service process that incorporates the concepts of public assets and region that, therefore, calls upon the management. Also, because it is not responsibility of a single factor - the State, health system involves the social mobilization and aspects of citizenship and social organization. In this sense, we sought a theoretical framework in the following subjects: public management of heritage, local development, process, social mobilization.

The health services, particularly the public health, have low tangibility or poor visibility and require high interpersonal attention. Its performance is more important than the execution itself. The level of choice and client control is low and the environment is a key component that has a relative role in the assistance (Johns, 1999).

The supplier sees service offering in terms of process, related to the operation. The process contains elements of delivery and interpersonal performance. Thus, health services need to be managed differently. Moreover, the client sees the service offering as a phenomenon, part of the experience of life, and that all services are experienced in the sense of the past: adventure, impact on direction. The customer experience has elements of satisfaction, need of content hedonic/emotional.

In the view of services as a process, Goodwin (1996) points out that consumers or users should be educated and more productive participants. As in the second sector, the third sector - also called services - should excel by the productivity and quality. Jones and Hall (1996) use the term Servility (productivity in service) to represent the value of the service performance versus essential benefit transferred. Swan and Combs (1976) emphasize that customer satisfaction replaces quality service, while Bitner and Hubbert (1994) differentiate service quality and satisfaction, noting that satisfaction is the result of specific service experience.

2.1 System

System is approached from several fields of knowledge. Although it may seem ambiguous, the understanding of the word must be contextualized. According to Moderno Dictionário (2005), it can be defined as:

1. Set of principles that are true or false, where conclusions are deduced coordinated with each other, upon which a doctrine is established a doctrine, theory or opinion;
2. Body of standards or rules, intertwined in a logical concatenation, and at least, believable, forming a harmonious whole;

3. Set or combination of things or parts to form a whole unit or complex: Channels system;
4. Custom or peculiar habit to every creature;
5. Classification process of beings belonging to Natural History.
6. Astronomy, group of heavenly bodies associated and acting together, according to certain natural laws: Solar system.
7. Anatomy, in turn, understands it as a set of organs composed of the same organs and intended for similar functions.
8. Method, way, shape.

To Biology, as Seixas (2009) our body is made up of several **body systems**. These systems are: digestive, respiratory, circulatory, excretory, nervous, locomotor, reproductive, and endocrinous. In healthy people, they must operate in full synchrony, as in a production line. For this to occur it is necessary interdependence between them.

In music, Bromberg (2011) says that "Vincenzo Galileo began to unify the musical system of multiple independent voices (polyphony) and turn it into a system more similar to what exists today, composed of diatonic musical scales (which have a certain tone relative to a main musical note)".

There are, in here, several synonyms for systems: arrangement, order, processo. The conceptualization that considers it a method, combination of media, processes intended to produce a certain result, plan, are well accepted for the scope of this study.

2.2 Heritage

To Ferreira (2003) "Heritage, from the point of view of Accounting: for a company it is the assets, rights and obligations it has. The term also can be applied, with the same effect, for individuals. In a mathematical equation Assets (A) can be understood as a result of assets and rights. Passive (P) is equal to Obligations."

From the point of view of Law, Chalhub (2003) says: "Heritage is the set of subjective rights on certain thing with monetary value." Heritage is universality and is indivisible, and cannot be separated. From the point of view of Culture, as the website of IPHAN (Institute of National Historical and Artistic Heritage): "Cultural Heritage is not only restricted to isolated properties, churches or palaces, but in its contemporary thinking it extends to private property, urban places and even environments with important natural landscape, going through pictures, furniture, utensils and other movable properties."

2.3 Area and Territory

Considering the focus of Critical Geography, "whose most significant vector is centered on historical materialism and on the Marxist dialectics", the region is seen as "dialectical relationships between spatial forms and historical processes that shape social groups" [...] "where the spatial organization is an integral part of a given society " (LACOSTE, 1976).

To Gomes (1996), "from the point of view of Traditional Geography: regions were seen as summaries of physical and social integration, being recognized by the description of the landscape." In this sense, the region would be related to a different landscape.

Schaefer (1953) introduces the standpoint of Quantitative Geography: the region is now thought of as a division of a defined area from homogeneity criteria and/or functional relationships. The "belts" of the North American agriculture are examples of homogeneous regions (wheat belt, corn belt, etc.), while the regions of influence of cities are examples of functional regions.

The Humanist Geography, at least in Frémont's proposed (1984), conceives "the region not only on the basis of economic and politico-administrative criteria, but also as a space for identity and belonging." The region is, thus, a larger space than the place and where people live and with whom an individual identifies. For example, if a person who was born in Northeastern Brazil thinks the Northeast people have their own way of being, he/she will think of this region as the space in which people live like her/him, even though this person has not seen much of this region.

It is also worth mentioning that Santos (2001) developed a proposal for regionalization of Brazil in his book "Brazil: land and society in the XXI century." Due to the crisis of regional planning, which begins in the 1980s, the concept of region has not been much considered by geography or by the regional economy. Nowadays, the term most commonly used by Latin American geographers is territory.

2.4 Process

From the point of view of Law, process is a way of proceed, necessary to valid exercise of power, according to Cintra and others (2008). Like the term system, process permeates many areas of knowledge. For anatomy, processes are the natural prominence or protuberance that organs, such as bones, have in the organisms. Now, Psychology considers the performance of a composed cognitive activity; an operation that affects mental contents; thought process; the cognitive memory process.

From the standpoint of Administration it is the set of activities performed to generate results to the client, from the beginning of the request until the delivery of the product. According to another more modern concept, which is multidisciplinary, it is the synchronicity of inputs, activities, infrastructure and necessary references to add value to humans.

2.5 Development

For the Social Sciences, social development is the evolution of the components of society (human capital) and the way they relate (social capital). For Franco (2011), every Development is Social Development, and he adds that there is no development without altering both the social and the human capital.

According to the United Nations Development Programme (UNDP, 2008), the human development is what puts people at the center of development, promoting the potential of people, increase their possibilities and enjoyment of freedom to live the life they value. Its most important publication on human development is The Human Development Report (HDR).

UNDP develops two important indicators: a development indicator, the Human Development Index (HDI) which "assumes that to gauge the progress of a population there should not only be considered the economic dimension (GDP - Gross Domestic Product), but also other social characteristics, cultural and political that influence the quality of human life;" "and the poverty indicator, the Multidimensional Poverty Index (MPI) which: "complements measures of poverty based on income. The MPI identifies deprivations in the same dimensions used in the HDI - health, education and living standards - and shows the number of people who are multidimensionality poor and the deprivations they face at the family level. The MPI uses 10 indicators; a family is considered poor if it suffers deprivations in more than three of these areas. The MPI can be decomposed by region, ethnicity and other groups, as well as by dimension. It may also be subject to adjustments for domestic use", as it can be seen in its 2010 HDR.

This concept of "Development" has its origins, as well as stressed by Sen (2000), in a classical thought, and in particular, with the ideas of Aristotle, who believed that achieving the fullest flowering of human capacities is the sense and the end of all development. The concept of human development has become a parallel concept to the notion of economic development, though the former is broader, because it also considers aspects of the economy, includes aspects such as quality of life, well-being and social and individual happiness inspired in the articles 22 and following Universal Declaration of Human Rights (UN, 1948).

Human development is the process by which a society improves the lives of its citizens through an increase in goods with those who can meet their basic and complementary needs, and creating an environment that respects their human rights. It is also considered a number of options that a human being has in his/her own way, to be or to do whatever he/she wants to be or to do. Human development can also be defined as a way of measuring the quality of human life that in its environment, and a key variable for the classification of a country or region.
In a generic sense, human development is the acquisition of part of individuals, communities and institutions, the ability to effectively participate in building a world civilization that is flourishing in both material and spiritual sense. Human development, yet according to the UNDP, integrates aspects of development related to social development, economic development (including local and rural development) and sustainable development.

According to Berns (2002), Psychology considers child development as an ordered sequence of progressive transformations resulting in an increased complexity of the organism, distinguishing by growth for relating changes in the composition and functioning of cells (cell differentiation), for the maturation of organ and systems and the acquisition of new functions. It can be considered a chain of phases an organic isolated, for example, thymus

and/or the immunologic system as a whole. The locomotion capacity, which depends on both of the nervous system development and the skeletal muscle.

3 The case of a Public Management Health Center in Campinas [SP], Brazil

3.1. Characterization of the study unit

The Health Center of Jardim Boa Esperança is located on the street Professor Renê de Oliveira Barreto 440, Jardim Boa Esperança, Campinas, State of São Paulo, in the Southeastern Brazil, one of the most developed in the country. The coverage area of the Health Center Jardim Boa Esperança comprehends the Eastern District of the Municipal Health. A number of users assisted by the Health Center Jardim Boa Esperança is 8,000 people per month, on average.

3.2 Methodological Approach

The method used in the investigative process was action research. In it, the researcher was active in all phases, establishing a close relationship with the other actors of the problem-solution. In addition, there had been used the principles of process for the resolution of identified problems, culminating in a method.

The research follows the guideline that every problem must be understood as a process. In essence it had been done the comparison or it had been tried to submit the problem to exhaustion with the principles of the process.

3.2.1 Identification and characterization of the problem

From a maieutic procedure, the preliminary research phase queried about how to drive properly the use of available resources and which processes could subsidize the solution of those problems. After all, what was the goal to be achieved?

In the monthly meetings of the Health Centre (HC), it was set a program of work along with the user community so they could say, without fear, the problems they need to be solved. This work was done by the HC staff, under the guidance of a professional, who questioned the whole community around the HC, for about a six month period. At the end of the work, the objective to be achieved was fully defined: the effective and appropriate assistance to the HC user population. After defining the objective, we started to verify what would be necessary to achieve it and how it would be accomplished. It can be verified that this effectuation would occur through new facilities for the HC and the availability of medicaments that met the prescriptions given to the community.

(i) The reason for the new facility was the need of a HC that could meet the following specifications:

1. Appropriate accommodation facilities for the user when he/she needed assistance.1
2. Adequate facilities to accommodate the administrative infrastructure of the HC.2
3. Adequate facilities for the accommodation of the HC manager.3
4. Facilities specific to the area of provision of medical services to the community.4
5. Installation of a larger and adequate pharmacy to meet the prescriptions or health workers, who would have the treatment done in the HC itself.5
6. Expansion of the kitchen, allowing better use by the employees of HC.

(ii) The prescription drugs should be available in a local pharmacy, as mentioned in the item (i) -5.

4 Comparison of the problem with the four principles of process

The process principles used in this and in the next section were based in Gattaz (2001; 2010) and in Gattaz Sobrinho (1999; 2000), as well as the adaptions proposed by ARGOLLO FERRÃO (2007; 2008).

4.1 Principle of Coevolution and the complex problem

The problem was already recognized: new facilities for the Health Center to meet the specifications. Analysis of coevolution of the problems tries to verify if the desired result in a context after being generated becomes the problem to be solved. To that end, it is important to know what would be the changes and challenges of the contemporary reality that would serve to analyze if the problem is coevolutive or not.

Changes in the Municipal Administration always affect the problem, making neccesary the repetition of several actions already done before. The construction of new facilities on the Helth Center challenges public managers and the surrounding population. Therefore, it was necessary to prepare a blueprint to contemplate the facilities through a team of architects/engineers of the City of Hall of Campinas and the hiring of an civil engineering firm to perform the specified construction in this plan.

1Banks for users to stay seated while waiting for assistance; a male and a female bathrooms; security service that would even orient users about their assistance; effective awning against bad weather.

2 Desk customer service with IT; a room to perform administrative jobs, containing cabinets for accommodating the folders containing the files of users, IT; furniture needed to carry out work, such as tables and chairs; and bathrooms (male and female) for employees.

3Furniture needed to carry out their work, such as table and chairs and cupboard; IT; bathroom designed specifically for the manager.

4Place for user assistance who needed: blood collection for analysis, pressure testing, specific services in which they had to lie down or sit. This place should be equipped with the necessary infrastructure to deliver the services mentioned above, consisting of: stretcher, cabinets to accommodate the materials used in blood collection, table and chair. Appropriate places for gynecological care. Suitable rooms for regular medical appointments. Suitable rooms for appointments and dental treatment. All these places should have tables and chairs, plus IT facilities.

5Adequate storage facilities for the storage of medicines; freezer to store medications that required cold storage; customer service desk; chair and table for the attendant of the pharmaceutical area, IT facilities.

These new facilities, coupled with the principle of coevolution, would determine that the problem was coevolutive.

4.2 Proto-Interaction and the comparison of the problem.

Proto Interaction is the exercise of recognizing reality and what is the model used for the interaction with it. The reality had been recognized (new facilities for the Health Center and the model used to interact with it should solve it, because it would take into account the development of new plant facilities by architects/engineers of the City Hall of Campinas and the hiring of a civil engineering company.

The hiring of civil engineering firm that would construct new facilities and the development of the new plant, in turn, would depend on the City Hall of Campinas willingness to do it. Therefore, the verification of this principle in the initial problem was not identified

4.3 Principle of Durability and the comparison with the problem

The results to be processed, references and infrastructure should be based on the perennial and not in the need to satisfy what should be owned. To this end, it is important to check the inconsistency and the palliative of the proposal. The proposal found indicated the construction of new facilities for the Center for Health.

When attempting to build such construction, hiring the engineering firm to run it took time to happen, because of the City Hall of Campinas claimed various reasons for doing it. This fact showed the inconsistency of the proposal found and, therefore, its sustainability.

4.4 Recognition principle and the comparison with the problem

The results to be processed, references and infrastructure must coexist valid and available at a moment so there is no need to make decisions in the transitions corresponding to the desired results. The research work with the user community of the Health Center Boa Esperança to recognize what was the effective problem (new facilities) lasted about six months to be completed.

After its completion it was found the need to perform the architectural work for the development of the new facilities plant. This would be easily accomplished using the framework of engineers/architects of the City Hall of Campinas. It happened here the most difficult problem to be solved: the hiring of a outsourced company that would do the work required by the City Hall. The recognition of the problem was not properly calculated.

4.5 Principle of energy expenditure and the comparison with the problem

The energy expenditure to recognize the problem implicated in the moving the workers from the Health Center Boa Esperança for about six months. The work to make the blueprint of the intended construction would be done in less than two months, with the participation of the management and users of the HC, what would require the concurrence of the City Hall,

through its Finance Department (FD). As the Municipal Executive did not hire who would construct the new facilities, even for legal reasons it was clear that the verification of energy expenditure had not properly occurred.

4.6 Principle of Sharing and the comparison with the problem

The results to be processed, references, infrastructure and the generated results should be the only channel of communication in context to transact, and thus, by sharing the results, the teaching-learning process occurs.

The various views (users, managers and employees) showed that deficiency in the facilities of the Health Center. For its solution, however, it was necessary that other views were considered, such as the DF Municipality of Campinas, for example. It was evident that the analysis of the share issue had not been conducted properly.

4.7 Principle of Representation and the comparison with the problem

The great difficulty to carry out such construction was the City Hall of Campinas hiring a civil engineering company to execute it. The Municipal Executive was fundamental, in terms of representation, because without its acquiescence, nothing would be materialized. There was not, therefore, the inclusion of a greater number of representations.

4.8 Principle of Duality and the comparison with the problem

The results we expect to recognize or generate always offer us two unexpected parts that teach us to accept and even want the imperfections of the abstractions offered by reality. The problem had two dual: (i) the failure of the development of the construction project of the Health Center, (ii) not hiring the engineering firm to perform it.

This would lead to the maintenance of the current situation and the problem would remain unsolved, with high wear of the population involved. Unfortunately, as the problem was not evaluated in this light, the dual materialized.

4.9 Principle of Self-Defense and the comparison with the problem

> […] the principle of self-defense looks for turn the art of war into the art of peace… Inhibition to the attack is a process in which there is the search for the self-defense. When it is considered that it is in self-defense, there is no need for any process to defend itself, because the attack does not reach where it is.
>
> The more processes are exercised, most processes are incorporated, less process simulation is needed, higher is the self-defense. Search and look to the future at the same time, that has already the conditions to accomplish it is to be in a self-defense state. When the process is entirely, there is no need to simulate the process, that is, there is no need to defend itself. The defense is spontaneous: it eliminates the need to generate abstraction. (GATTAZ SOBRINHO, 2001)

The abstraction of the initial problem was simply consider that the definition of the needs to build new facilities for the Health Center would solve the process. The reality showed that the problem had not been properly characterized, since such construction could only be achieved with the will of the City Hall of Campinas.

4.10 Principle of Transdisciplinarity and the comparison with the problem

Transdisciplinarity teaches us to see the complexity of the whole and to see the reality of the parties in quantum leaps, facilitating destruction builders. Would this problem be liable of disciplinary or multidisciplinary analysis? Considering its main factors (users, employees, managers and architects/engineers staff of the City Hall, each with its own specific vision, it became clear that it was a transdisciplinary problem.

4.11 Principle of Reconstruction and the comparison with the problem

Reality cannot be impunity fragmented. Therefore, it is not enough simply to break a problem into subproblems to study it better. It is needed to split it, indeed, but it is also needed to see the fractions that interact in context. Otherwise, no one would know how to say what those fractions are treated about. To find out, we must bear in mind the unit integration, the human beings. A problem can be broken for more than one way.

The initial problem was broken in a way that did not properly allow seeing the fractions that interacted in context: the inability of the City Hall of Campinas in hiring a civil engineering company that would construct what was desired for the new facility of the Health Center. Thereby, the result ended up not being what was expected.

4.12 Principle of Exponentiation and the comparison with the problem

The reference of the context is a base in which activity is an exponent. The context (or process) is an exponential dimensional (value, function and infrastructure). The reference is exponential to the value; the infrastructure is exponential to the value. But the value can also be exponential to the infrastructure and can be exponential to the reference. It is the multiplication of the multiplication of the multiplication, in three different dimensions. One is the base to another, which is the base to another.

Here is the rule of exponentiation: realize the limitations you impose when you add or remove a value; likewise on the infrastructure, because the effect is exponential. When there is a change, other values undergo through a process of changing. The principle of change leads us to think only in change.

Would there be a reductionist trend and simplification of the problem? Yes. This trend created the imagination that, from the blueprint preparation of the new facilities of Health Center, the problem would be solved, for easily would be its execution, which proved to be

completely wrong, as this application has become the big problem provided from a failure of one of the actors (the City Hall of Campinas) in fulfilling its part, legally.

4.13 Principle of Contextualization and the comparison with the problem

The principle of contextualization application avoids the risk of assuming the principle of unity as abstract. The unit brings the reality, from which it does not detach. When referring to the unity of the human being, we are talking about a real person, endowed with unique characteristics, their dreams, their virtues, their competence, their fears and their limitations, characteristics that distinguish it qualitatively from another person and prevent it to confuse or to identify itself with another person. The principle of unity (or reality) opposes itself (incorporating) to the logic of the particular and the general, the reasoning by inferences and deductions or logical principle of non-contradiction.

In our case, it was clear that there were inferences and deductions made in the solution presented to the initial problem, without considering the reality how it actually is: the legal impossibility of the City Hall of Campinas in fulfilling its part, by hiring the company in charge of construction new installations.

4.14 Principle of Self Repetition and the comparison with the problem

Was there a tendency to immediacy and to preconceived formulas? Yes. For the initial problem was the fact that trend. The pre-conceived formula was the design of the plants of new facilities by the team of architects/engineers of the City Hall, which would be easily accomplished. However, the intended construction would not be done, it would expired and would return to the initial problem.

The results to be generated should be analyzed until they do not differentiate from each other. Only by leaving the immediacy aside, it was envisioned that it was fundamental hiring the engineering firm to undertake a reform instead of building new facilities, and the generated result was the expected.

5 Conclusions

Several actions have been developed aimed at achieving the objectives. The problem was recurring and coevolutive. In the first stage, the problem was identified as the need to improve the quality of assistance to users of the Health Center. However, it was realized later, that the modernization and adaptation of infrastructure could be, at least in part, according to the needs of users. The involvement of the community around the Health Center Jardim Boa Esperança was crucial to hire an engineering firm to reform by the City Hall of Campinas.

Still with respect to the coevolution of the problem, the hiring was considered a problem and the City Hall of Campinas was unwilling to perform it. The allegations were always financial difficulties, lack of budget forecasting, etc. Where would this process coevoluate? Two possible answers to this process: its closure, without the reforms executed, by the City

Hall or the reforms, obtained by pressure performed by the users of the Health Center, with the Municipal Executive. The users of the Health Center decided to exercise the power of pressure on the City Hall to achieve what was desired and they have effectively done it, with hard work and mobilization.

As for the proto-interaction, the problem was established, under the principle of proto-interaction: its solution would depend on the pressure executed by users of the HC on the City Hall. The perennial problem was solved, since the pressure of the users resulted in the desired hiring. Also, it can be said that the time for the recognition of the problem, now fully specified, was zero and that there was no energy expenditure to recognize the problem.

With the inclusion of new visions (engineers and architects of the City Hall) and the Municipality itself, through its finance department, sharing the problem was properly resolved and the duality of the problem was solved when the possibility of not hiring the company to implement the reform by the City Hall was eliminated.

Self-defense of the case was represented in popular movements, by pressing the City Hall to hire the firm. As the reconstruction of the problem, one of the fractions that we interfaced on the context had not been properly seen: the effective provision of the City Hall to hire a civil engineering firm that would reform the desired new facilities of the Health Center. The effective pressure of the users in this sense turned this provision a reality.

Regarding the problem of exponentiation, we noticed a trend and reductionist simplification of the problem that with the development of the architectural plan of reforms of the health center, the problem would be solved, forgetting the unwillingness one of the actors (the Municipality of Campinas) to fulfill their part (to hire the engineering firm), which was solved by pressure from users. The recognition of the context of the problem - the solution presented to the initial problem, without considering the reality how it actually was: the will of the City Hall of Campinas in fulfilling its part, to hire the company in charge of the reform, had shown that the context was not properly recognized. With this effective recognition it can be verified what would be its solution: popular pressure for real hiring the company in charge of the reform.

As for the self repetition the problem, there was a tendency to immediacy and to the preconceived formulas. The preconceived formula was the elaboration of the reform plants by the team of architects/engineers of the City Hall of Campinas for the solution of the problem. The self- repetition of the problem was not properly questioned, because the formula did not represent its solution. Only by verifying if this trend the real resolution to the problem appeared, also through hiring the engineering company designed to effect reform. The research has shown that the proper use of the principles has enabled the efficiency and effectiveness of the procedure presented in here.

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