Participation in social architecture: contributions to a new methodology

Extended Abstract

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Abstract

This dissertation, analyzing the relationships between architect and user, intends to discuss the inclusion of non-experts in the design of architecture projects in order to reach the framing of a working methodology to apply to participatory projects in social architecture. In order to achieve this, the work began with an analysis of architectural participatory processes already put in place and the models that were used in these. Later, framing the importance of other disciplines in these processes, it was understood that it would be essential to analyze participation methods in procedures related to marketing, since this discipline focuses on the study of consumer behaviour. By confronting studies of participation in Architecture and Marketing, it was then possible to make an informed and rigorous methodological proposal defining how a process of participatory social architecture could be carried out.

The results of the study carried out allowed, on the one hand, the design of a proposal for a systematic and rigorous work method to implement in participatory social projects of architecture and, on the other hand, the discussion of the architect's role in this type of social projects, emphasizing the need for multidisciplinary work and transformations on the training of architectural students.

Keywords: Social architecture, participation, consumer, marketing

Introduction

As society has evolved, reacting and overcoming problems that have emerged, architecture also noted changes that accompanied the social transformations. The question that arises at this point is to understand how architecture has been accompanying (or not) the contemporary society and how changes must be operated in architects' actions so that architecture can respond better to the fulfilment of human needs.

From the twentieth century, large-scale urban transformations have been taking place. With these changes came the concept of "complex problems" related to more intricate and interrelated urban genesis problems. The large urban transformations associated with such problems, generated a new dimension in architectural production in which the architect's role came to become increasingly inclusive in working with communities and non-experts in the design of architectural projects.

It is this social context of architecture and the architect that this thesis focuses on, namely:

- Participatory processes in architecture in the last two centuries;
− The existence of defined models for implementing such projects;
− How the processes of participation have been carried out in areas beyond the architecture;
− The role of architecture in relation with other disciplines when it comes to participatory processes.

With the main objective of drawing a proposed method to be used to participatory social process architecture, the way research was conducted in the following manner:

1. Participation in architecture: To understand what has been done in the field of participatory architecture, beginning with a synthetic historical background and an investigation focused on studies on the participation and methodologies developed (both national and internationally). Following this research a schematic was drawn of what might be a synthetic methodology of participatory social architecture.

2. Participation in marketing: The importance of studying marketing, as it deals with the relationship between producers and consumers. The chapter opens with a brief explanation about marketing, how this relates to the development of new products and co-creation and training events. It begins then a literature review phase, in which there were analyzed studies relating to consumer integration in product development and studies relating to surveying the needs and desires of consumers in architecture. At the end of the chapter, there were identified marketing tools related to how architects should interact with the user, which can be usefully applied in participatory social process architecture.

3. Methodology proposal: In this phase it is already possible to gather the information found in the first two chapters and intersect the architecture tools with the marketing tools studied, arriving at the central aim of the dissertation that is the proposal for a methodology to use in participatory social architecture projects.

4. Methodology testing: Finally, in order to emphasize that aspects of the methodology proposed that are similar or different from cases of contemporary social architecture, the first will be compared with the procedural method used in a case of real and current study. This will consolidate the value of the proposed method, and contribute to the understanding of what the role of the architect is when working with the user in social architecture: what forms of interaction are there between them and how can they trigger processes of participation ensuring the sustainability of the projects undertaken and the satisfaction of users for whom and with whom they were created.

1. Participation in architecture

Through a gathering of several cases of participation in multiple geographies, it is expected to understand whether there is a pattern/model in the processing of social-oriented architecture (or several models) and what are the main criteria that architects and community take into account when developing such projects.
From the analysed international episodes of social architecture projects, we can understand that there have been implemented many types of processes across the globe through different methodologies. However, all the projects examined had common points:

- All emphasized the need of some kind of organized community activism manifesting interest in retraining and restructuring within that community;
- The projects were implemented through the academia (or at least supported by universities);
- All processes framed construction phase as having participatory potential, stating that it can serve the purpose of training and employing the population, promoting local businesses;
- The relationship between architecture and areas such as sociology is seen as essential, particularly in post-construction (Aravena, 2012, p. 174), where the population starts using the design and begins to find problems and to seek solutions for them;
- The role of stakeholders and managing their expectations is a critical factor in the proceedings since its implementation (Jenkins & Forsyth, 2010, p. 167)

Summarizing the process of social architectural and participatory processes in Portugal, we understand that there was (in the SAAL processes) a concern with the origin of the technical help request to come from the communities, based on the premise that the project is done with the community and not for the community. In this context, attempts were made for the central services (public funding structures) to be a passive figure, focusing the accountability for designing and acting in the community and the architects. Similarly to what happened internationally, also in the SAAL processes it was understood that the project did not end with the finishing of construction, but that this phase was only the beginning of the true social experience.

In a more contemporary outlook, maintaining the line of reasoning that emphasizes the importance of the action from the community, there have been implemented several participated social architecture projects (some entered in international projects - such as Local Agenda 21 and USER) and there has been an increasing concern in the integration of several entities (global and local, public and private) in order to increase the satisfaction of urban citizens. These contemporary concerns about meeting the needs and desires of individuals (inserted in communities) is being increasingly treated as an issue that starts at the local level and, through various local projects, helps solving problems at larger scales.

Having studied the different methods used nationally and internationally to process participatory social architecture projects, it is now possible to outline a work methodology (Figure 1) that includes universal points used in all the projects analyzed.
This methodological approach (shown in Figure 1) is a summary of the assumptions that all other participatory interventions analyzed: the order of the process must start from the community (as claimed by Delfim Sardo in Bandeirinha et al. (2014, p.29), Forsyth and Jenkins (2010, p.35 and 38) and Doina Petrescu in Jones et al., (2009, p.45) . Thus, it is implied the existence of a public technical support service at the local level. The organized community that recognizes the existence of a problem and recognizing in the services public technical support the potential for solving them, uses these services, specifying the type of problem identified, so as to constitute a team (like the brigades of SAAL processes) that can operate in the territory in question.

After the community intervention order, there is a project action phase. Although there were analyzed processes where participation is developed only in the design phase, all studied authors mentioned somehow the construction phase and state that there is a link between the program, the design and the construction phases (Giancarlo de Carlo in Bandeirinha, et al, 2014, p 276). In the action phase it is important to understand that it is through the creation of a trust environment that are managed the expectations of stakeholders and is made possible the development of the project.

Upon completion of the construction, the process of participation is not closed. Rather, it is in the stage the immediately proceeds construction that the community has the first direct contact with the product that they helped develop. Thus, there must be careful supervision of interactions in order to understand in what ways it is still necessary to educate the population and to provide the tools that will allow population to achieve future autonomy with the project.

Jenkins and Forsyth (2010) argue that "participation (...) is also related to the donation and sharing of information" and reaffirmed "the importance of a post-completion feedback on the work plan." One of the central issues in the outline of a methodology to be applied to cases of participation in social architecture is the sharing of knowledge among similar projects. Thus, it is essential that this methodology has the ability to improve itself, allowing constant transformations and improvements.

2. Participation in marketing

Having analyzed international and national scenarios of participation in social architectural projects and understood that these processes involve different areas around the goal of satisfying the user and to include it in project decisions, it is necessary to examine how to discover their needs, integrate their decisions in the project and empower them. In this scenario, it becomes imperative to
turn to the discipline of marketing, that has always had the user in the core of its studies, because, marketing deals with identifying and meeting human and social needs" (Kotler, 2003, p. 3).

According to Kotler (2003, p.61), "consumer satisfaction will depend on the performance of supply relatively to his expectation". Thus, in order to achieve customer satisfaction, one must identify his needs and preferences: in short, what are the attributes of a product or service that will weigh on their perception of quality and which, when properly identified and put into practice, provide the ultimate satisfaction of the consumer. The discovery of the list of attributes that contribute to satisfaction is not only important for marketing to study, but covers all the areas where there is a consumer with needs to be met. One example where this is important is in social architecture. In this case, there are multiple consumers / users to meet and there is a need to find the attributes they value in social architecture design (be it an urban plan, residential or even product), to include these attributes in the project and ensure the satisfaction of the community for which it is developed.

In order to assess, in the case of participatory social architecture, the needs and desires of the population, studies were sought that analyze co-creation and its applications. These studies intended to lead the reader along three important points with regard to consumer interaction with companies in the creation of new products: first it is important to understand the information collection methods available when working with consumers, in order to know the best way to meet their wants and needs. Then, once known the methods and having chose and implemented them, the collected information needs to be analyzed.

In what the studies analyzed is regarded, it is important to start by stating that "satisfaction is measured by the consumer after the consumption" (Gilbert & Veloutsou, 2006). Another important aspect to consider is that "consumers may have needs of which they are not aware (...) and may not be able to articulate them" (Kleef, et al., 2005, p. 185) and, as such, standardized methods of collecting data may be more objective and representative of the community. However, the same author argues that a less structured questionnaire can come out new ideas for the new product.

What was stated above has two possible avenues for the development of the methodology (illustrated in Figure 2). On the one hand, at an early stage (before the actual drafting of the program), structured questionnaires can be used (using the Likert scale of five points for responses, as did the authors analyzed in their surveys on residential satisfaction), because "when dealing with a population that is probably belonging to a group of low-income, with low interest and motivation, data collection through structured questionnaires is the preferred option" (Mohit, et al., 2010, p. 22). On the other hand, in the project development stage, in which there should be close cooperation between the multidisciplinary team of the project and the

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<td>Concern to ensure maintenance of expectations (through community participation or visits to the construction site)</td>
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**Figure 2** - Contributions of Marketing for a new methodology to be associated with contributions of Architecture already shown in Figure 1
people for whom the project is developed, more open and informal collection methods can be used (such as the workshops and interviews implemented in the SAAL and Aravena processes). Having said this, it seems coherent to work, primarily, through structured questionnaires in the pre-design phase (which we will call "needs assessment") with a number of representative residents of the community (as did the authors analyzed in this chapter); and, later, through more dynamic information collection methods, to work with those individuals from the community who are motivated and interested in collaborating in the project development (ensuring that all segments of the population are represented by at least a participant).

Referring to figure 2 again, it is worth noting that that is a change in the program phase when comparing to the same phase in figure 1: where it used to read "identification of areas of expertise " (in figure 1), one can now read "confirmation of practice areas". This change is due to the fact that there is now a new phase prior to the action (the "needs assessment" phase, found in marketing literature), so in the program phase, there is only the need to confirm that the identified areas of activity in the questionnaire correspond to the ones the residents agree on.

With regard to the assessment of preferences (by measuring the levels of satisfaction) of the population, the authors also agree. We can understand through these quotes, there is need for data collection (in questionnaires) in three key issues: users (and demographic indicators related thereto), the private sphere (the residence) and the public sphere (the context), since these are three main groups of factors that will affect the overall satisfaction with housing situation (as shown in figure 3).

As a conclusive note on the marketing chapter, it is worth noting that, since "studies to determine the residential satisfaction are specific to the area of residence, type of provided house, community, housing policies and the country itself" (Mohit & Azim, 2012, p. 3), the initial questionnaire (the "needs assessment" one) should ideally be carried out before each social architecture design participatory nature. However, every time you apply the template, you can evaluate what worked and did not work in every situation and put these conclusions available on the methodology. Thus, it is important to establish a "communications network" so that the data collected (through feedback) in an intervention can be analyzed and contrasted with the collected another similar intervention. Moreover, it may be interesting to perform after the completion of the project, a new questionnaire similar to the initial one (Figure 4), but relating to new residential facilities carried out in order to be able to understand if it was, in fact, possible to overcome lower levels of satisfaction.
The carrying out of a second questionnaire (the evaluation), similar to that implemented in the project planning stage at the end of construction and after the concluding phase where the population is already trained and act autonomously, is supported by the study conducted by Varady and Carrozza (2010), carried out over four years in order to understand the changes in satisfaction, realizing that "the multifaceted experiences before, during and after consumption all contribute to individual satisfaction (…). New experiences and awareness levels lead to new expectation levels, leading to changes in satisfaction levels" (Varady & Carrozza, 2010, p. 800).

3. Methodology proposal

Combining figures 1, 2 and 4, which are representative of the literature review of contributions to the respective areas of study for the proposal of a new methodology, we arrive at a final draft stage (figure 5), in which we can find the various work phases to be developed along a participatory social architectural project.

This type of process should begin with the participation of public and private entities in the investment of the transformation of a community. These entities, realizing that there are problems confined to a community and understanding they are able to help solving them, make the decision to act within that community. Then, organized structures of the community will find the technical support services necessary help the development of their community renewal projects.

Being the main objective of the "needs assessment" phase the evaluation of satisfaction with current housing, the first step will be the assembly of the questionnaire. There should be conducted surveys that are complete and cover all observable aspects of public and private sphere of residential conditions. This survey should also include questions about demographic characteristics of respondents and their households. Once assembled the questionnaire, we must implement it and carry out the analysis of the data collected and, using statistical methods, iterate residential characteristics considered most and least influential in overall housing satisfaction, so that we can act on the ones that promote higher levels of dissatisfaction and maintain (at least) the satisfaction with the factors that contribute to increased satisfaction among the population.

The action will be divided into three closely related steps: Program Design and Construction.

Figure 5 - Methodology to apply in social participatory architecture
In the workshop program, the restrictions that will be imposed on the project should be reported. Then, the areas of intervention of the project should be confirmed and the technical team must explain to the community group the results of the questionnaire and compare them with their opinions, so that, together, they can prioritize the problems to solve and start thinking of ways of working them out. This workshop should finish with the identification of companies and people willing to work on the project.

In the design phase of the project it is necessary to present ideas to the public to discuss and, afterwards, to give to the population power to intervene and change the proposals. It must be guaranteed in the design phase that there is a constant interaction between architects and community over the developments of the design.

In the construction phase, so that community expectations are well managed, it is important to invite the whole community to observe the construction and to have the technical team is available to clarify the resident's doubts about the project, so that the chances of negative reactions at the time of occupation on grounds of lack of information can be reduced.

The independent development phase corresponds to the end of the architectural design. After the project is complete and ready to use, it is important to manage, in an initial phase, how people interact with it so that they become familiar with the new spaces they helped create.

Once the project is completed and built, technical teams must then, in the post construction phase, remain in scope for community action in order to assist residents with regard to matters relating to the new project (how maintenance should be carried out, what kind of behaviour should be adopted in the spaces, etc.).

With the capacitating process in action, the work of the technical teams finishes. These leave the already developed community space and the population starts the independent use of the built project, already trained on how to deal with it and how to solve problems that may arise in the future.

In the evaluation phase, it is important to carry out a questionnaire as similar as possible to the one made in the needs assessment phase, in order to contrast the responses collected in both cases and confirm that, with the implementation of the project, there have been changes at the level of residential satisfaction.

Regarding feedback, this step is carried out throughout the process implemented of a participatory architecture project that used the proposed methodology. The technical team that intervened in the project will, through the assessments carried out and experience gained throughout the project's development, identify obstacles and opportunities present in the methodology used. They will analyze each phase and point directions (publishing their findings, so that they are accessible to future actors of participatory social process architecture, interested in using this same methodology) for using this methodology in future cases of participatory architecture. The feedback stage has transforming potential for all the proposed methodology, because it is sustained that there is a need for practical learning with regard to a proposal based on theoretical analysis.
4. Methodology Testing

It is interesting to understand that while the methodology carried out in the implementation of the project "O nosso km2" is distinguished in several points of the proposal in the dissertation that presents itself (see figure 6), it is observed that the biggest discrepancy exists in the phases proposed by the discipline of marketing, which seems coherent, since the intersection of marketing and architecture is a relatively unexplored subject. The main consequences of the failure of these stages (or meeting them using different approaches) is, in addition to the difficulty in confusing the realism of measured attributes informally, the existing obstacles in the comparison of ultimate satisfaction with the initial (important to ensure efficient provision of public services) and the difficulty in reporting the results, preventing the creation of a network of scientific information to be shared publicly, which may be crucial to the execution of similar projects.

Conclusions

It is important to understand that the proposed methodology to be applied in cases of participation in social architectural projects present in this work it is not a static process. This is just the first step in finding an effective and efficient way to carry out participatory architectural designs, and the self-transformations foreseen in the methodology will be used to ensure this in the future, when applied in various projects and being successively updated through feedback.

One of the first observations that one can made is related to the fact that marketing decisively contributes to participation in social architecture. This happens because the tools studied and implemented in marketing seem like very rigorous tools, facilitating the identification of needs and wants of users. This social science allows us to find a process involving a formal approach to logic and math problem solving, that will facilitate the architectural team work in developing the project. In addition, the evaluation of the project's success will be based also on tools already explored in marketing, such as carrying out a second satisfaction assessment that, contrasted with the first, provides information about the needs for change.

This methodology, that includes the study of disciplines other than architecture, challenges and promotes the role of the architect as a social agent. There is admittedly a will for metamorphosing...
roles and learning from the experience. This premise is easily argued by the way the methodology works: through feedback that generates new inputs that improve the model, that can be used to be implemented in new projects (always updated according to the work done on projects earlier), but also to evaluate projects in development or terminated (as done in the case of "O nosso Km2"), making it a useful tool for virtually all cases of social architecture projects. The model, overall, can then be applied to each project, and the features attached to them will provide data that will contribute to the formation of a body of knowledge that will serve to progressively improve the methodology, since the information and feedback about each project should be reported and published so as to be accessible to the public, and particularly to those who are interested in further developing social participatory architectural projects using this methodology.

References