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Architectural conservation in Brazilian architecture and urban design undergraduation courses: the teaching disarticulations between theory and project practice

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Abstract

In the last two decades, discussions and methods of architectural conservation design have become more and more available in Brazil. However, in spite of this aparent development, heritage preservation still faces a minor impact over the general curricula of Brazilian schools of architeture and urban design, provoking specific disarticulations of theory and practice in built heritage conservation education. This article aims to discuss these issues based on contemporary studies on higher education and recent recommedations proposed for architectural conservation education, addressing the need for awareness of preservation as a potential field for architectural creation.

Keywords: Architectural Conservation; Architectural Design Teaching; Conservation Project; Architectural Teaching Disciplines; Brazilian Architectural Conservation Teaching; Retrospective Techniques

1. Introduction

In the last two decades, discussions and methods of architectural conservation design have become more and more available in Brazil. Over the years, the demands towards the heritage importance as a cultural basis for social development – stimulated by various national and international organizations – have popularized different types of

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operational interventions in the existing architecture, making possible and more frequent the preservation of many cultural assets. A key role in this process was the growth of iniciatives to implement conservation specialization couses since 1970's in Brazil, following UNESCO recommendations (Jokkilehto, 2006) and related to architecture and urban design graduation courses in various public universities with the help of cultural heritage safeguard institutions (Mayumi, 2008) –, affirming a positive trend in favor of architectural restoration as a field that congregates theoretical knowledge and practical experiences of design and intervention on architectural heritage. Moreover, it is known that those iniciatives enabled a new recognition of architectural and urban history as an important foundation of people's identity in Brazil, as over the world (Fonseca, 2005).

However, in spite of this apparent development, heritage preservation still faces a minor impact over the general curricula of Brazilian schools of architecture and urban design. As architectural design education in several public and private undergraduation courses still focus the new (and isolated) building as the single tool to stimulate creative capacities, it leaves often a disproportional time to enhance on future architects and urban designers a conservationist approach to exercise methods and operational techniques available today to prevent the decay of built architecture. Although several studies argue that the cause of this imbalance might be the persistence of a modernist tradition on Brazilian architectural education – since several of Brazilian public universities were created over that spirit in the 1940´s –, the real cause of it may be the current interpretations of the field called "Retrospective Techniques" implemented in the 1990's on curricula to reinforce heritage education but still acknowledged as an only theoretical discipline. Combined, they're provoking nowadays serious disarticulations between theory and project practice of architectural conservation (Schlee, Medeiros & Ferreira, 2003).

This article aims to address these issues based on contemporary studies on higher education and recent recommendations proposed for architectural conservation education[†]. It analyses Brazilian case to raise awareness on the need of new educational criteria systematization that includes teaching strategies and curricula revisions about conservation on Brazilian architecture and urban design courses as a result of global and local points of view. To contribute on this conference for the international debate, this paper also seeks to formulate specific proposals that could be useful to similar cases in order to enhance a common educational agenda between universities, professionals and the general society on the cultural heritage field.

2. Education and architectural education

According to Carlos Rodrigues Brandão (1981), education is the process in which accumulated knowledge systems and values of a given society are transferred to new generations. To him, education is an identity tool, present in various cultures in different ways. Education, as so, is a fundamental instrument of socialization that triggers in the educated one the awareness of himself and the culture in which he is. Thus, education is based on passive and active events in which to educate and be educated are processes of acknowledgement of ourselves on a daily relationship with environment stimulae.

In a more recent approach, Bernard Charlot (2006, p. 15) states that education is a science with poorly defined borders, consisting of "a triple process of humanization, socialization and entry into a culture." As a practice, education also comprises actions towards the autonomization of individuals (Freire, 1996), but in an inseparable framework, as they are also integrated into a broader social set. In his interpretation, Charlot addresses that beyond the role of teachers and students, institutional structures have a leading role, at various levels, negotiating the possibilities of cultural integration in the same range of values. Therefore, education is a continuous process, endless in itself.

Within these parameters, institutions (as systems) are thus responsible for determining the specific variants of educational processes, which can be summarized in three large – sometimes overlapped – types of education, that shape together the individual into a culture: the formal education, the non-formal education and the informal education. As describes Maria da Glória Gohn (2006), "formal education is the one developed in schools, with previously marked content; the informal is the one that individuals learn during their socialization process – inside the family, neighborhood, club, friends, etc., fully charged of its own values and cultures, with the sentiment of belonging and other inherited feelings; and non-formal education is the one that one learns 'through life', by sharing experiences, especially in everyday spaces of collective action".

Architectural education carries, as a process, all of these premises. It is based fundamentally on the social and cultural interpretations of Architecture as a science inside the formal higher education and, because of its professional bias, it concentrates inherent complexities of non-formal education associated to practical knowledge inside an "architectural culture" socially built.

In Brazil, according with professor and architect João Batista Vilanova Artigas, the architecture and urban design education has been completely transformed in the 20th century. Due to political positions of Brazilian architects and the progressive vision affiliated with the modern movement, a significant shift was promoted on architecture culture. The social transformation agenda in the 1930's led the architects to distinguish themselves away from the civil engineers who poorly planned and the constructors who poorly built. Especially in major cities like São Paulo and Rio de Janeiro, architecture needed to be redefined as a new design activity, by the depletion of an already very fragile Fine Arts system, "which taught students in cubicles, where every man expressed a perfectly tinted individuality on a monumental level" (Artigas, 1970, p. 89) and against the growth of "schools linked exclusively to technology" with the "tendency to limit the universalizing vision of architect as a man linked to artistic generalizations" (Id.).

To achieve this, the fundamental didactic instrument adopted were the "studios", spaces to focus on new project methodologies in a formal educational system, resulting a "culture" that could even enhance non-forrmal and informal education towards architectural creation in new public schools founded from the 1940's through 1960's[‡]. It is important to note that the "studio" wasn't, in fact, new: it dates back to the earliest forms of education in art history. However, as it was for the vanguards in the beginning of the 20th century, the modern architectural studio was a resignification of methodologies, a space for free circulation of ideas, experiences and architectural production to help the development of new social values associated with rationalist design but maintaining the predominance of master-apprentice relationship. Overall, it was an educational space that allowed the narrowing of perceptions about the importance of integration of architectural design with urban planning, development of formulas and innovative architectural technologies as a result of the modern design processes and a new appreciation of the architect as a professional, nor technical, nor artist, but the one able to promote such reconciliation coherently.

The changing point on this educational structure occurred in 1964, with the military coup in Brazil. The expansion of private sector and the crisis of formal higher education due to repression deposed the figure of the professor-architect, weakening master-apprentice relationship. As a result, the teaching of architecture – previously an aesthetic and social statement – was bequeathed into pure pragmatic actions in which many authors note, until today, in several dissociations between architectural production and university research. (Schlee, Medeiros & Ferreira, 2003).

Other major impacts were the curriculum compartmentalisation into "grids" and the lack of integration of architectural research into the design process *pari passu* with the gradual decline of Brazilian modern architecture

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[‡] It´s important to cite some important institutions created with that spirit: the Federal University of Rio de Janeiro Faculty of Architecture and Urbanism (FAU-UFRJ) founded in 1945 (detached from the National School of Fine Arts), the University of São Paulo Faculty of Architecture and Urbanism (FAU-USP), founded in 1948 (detached from the Polytechnique School in the same University) and the Mackenzie Presbiterian University Faculty of Architecture in São Paulo, founded in 1947, the first private school of architecture and urban design. It deserves recognition also the Federal University of Bahia Faculty of Architecture and Urbanism, founded in 1949 (with the definitive incorporation of the University of Salvador Fine Arts School) and the Federal University of Minas Gerais School of Architecture created in the 30´s but federalized in the 40's.

internationally. Design disciplines were emptied of interdisciplinary principles as gradually new professors frequently distant from professional practice were and are introduced until today. This lead to severe curriculum disarticulation over the decades and a serious lack of critical view in students, especially in those institutions with strong bonds with the private sector – almost 75% of all architecture and urban design courses in Brazil today (Maragno, 2013).

As Roberto Eustáquio dos Santos (2003, p. 118) states, "the Brazilian architecture school suffered and suffers from a variety of problems, among which stands out the lack of preparation for mass education. From a certain point of view, the discussion about education is frequently replaced by the curriculum problem, as mass education is closely linked to control mechanisms produced by the bureaucratic organization of education. Of course, in the way that it becomes a resource within the field, curriculum becomes subject of dispute, because, from it, we can glimpse the possibilities of influence in the field of architecture. Curricular prescriptions start to signify a mean of qualitative change in education and, therefore, on the architecture effective practice".

Hence many institutions nowadays regained its democratic framework in the 1990's, they are still suffering from this process due to several contemporary dilemmas. As a result, architectural curriculum discussions haven't yet been able to restablish its own social agenda (Maragno, 2013).

3. What about architectural conservation education?

In 1994, Brazilian Ministry of Education instituted new curriculum guidelines to architectural and urban design undergraduation courses in Brazil, creating for the first time a field called "Retrospective Techniques" (*Técnicas Retrospectivas*). The area is described as "the projectual practices and technological solutions for the preservation, conservation, restoration, reconstruction, rehabilitation and reuse of buildings, sets and cities" (Brasil, 1994, p. 3), skills that were previously scattered in the training of architects and began to integrate this new area of contemporary concern.

The principles of the field – especially his name – were taken from the article "The conservation operators" (*Gli operatori della conservazione*) by Leonardo Benevolo (Benevolo, 1984), professor of architectural history at the University of Florence and theorist with wide international circulation. In this text, a conference presented in 1980, Benevolo expressed a general concern about the preservation of craft activities and the need for preservation of traditional work over crescent development of modern design and construction methods.

To guide his arguments, the historian sought to discuss the diffuse boundaries in architectural history between art and industry, formulating the need for revision of contemporary architectural practice. With clear position contrary to the disappearance of hand-intensive traditional constructors – that is, those professionals who have the knowledge and "operate" traditionally ancient artifacts – Benevolo explores in the text the need for resumption of teaching handmade construction techniques by defining, in what he calls "retrospective techniques", the contemporary practices in favor of that recovery.

In his words, "the conservation of cultural assets, buildings and historic centers is, therefore, part of a larger program: the maintenance and rehabilitation of all built landscape constructed in the distant and near past. The techniques that we can call retrospective – of reinstatement (*ripristinazione*), restoration, restructuring and rebuilding of artifacts – have an ever-increasing weight on contemporary production. All productive organization is undergoing through changes as a result of it and seeks a new balance between craft and industry, important for these tasks. So, our discussions acquire a new resonance. The conservation of ancient artifacts could become the main topic and the experimental laboratory of generalized conservation, which will be the dominant theme in the coming years." (Benevolo, 1984, p. 193).

To Benevolo, the field of "Retrospective Techniques" is the space where one can study and acknowledge the traditional practices of architectural production in order to define instruments in favor of appropriate restoration in the future. As stated, in a course of architecture and urban design, it can be translated in one (or several) theoretical and/or practical disciplines where a student develops the skills to understand the traditional construction manufacture, and, at the same time, acquires habilities related to the assessment of degradation in favor of its maintenance in a global and local perspective.

Although these theoretical bindings that could target many possibilities of curriculum structure, the field is still the subject of a great controversy, starting by its name, difficult to understand to many students and even scholars.

Since Brazilian universities enjoy a positively autonomy to develop their own political-pedagogical educational projects following those major guidelines by the Ministry of Education, the "Retrospective Techniques" discipline in curricula have been commonly seen from the perspective of "heritage awareness" – when it is understood linked to the theory of conservation (the most common approach) – or is being used in favor of contemporary pseudotheories of rehabilitation (Torsello, 1988), always without necessarily adhere to scientific restoration as a discipline to adequately provide field experience in favor of the preservation of constructive tradition (Schlee, Medeiros & Ferreira, 2003). The result is a justified critiscism, despite the good intentions, showing that there are larger issues in Brazilian formal higher education to effectively comprehend how a field with a vast and intricated knowledge could establish new ways of teaching architecture.

In this sense, more than the persistant of a "modern studio tradition", it is the lack of architecture education forums that fails to consider the new contemporary demands to interpret and preserve the existing architecture. Despite the debate promoted in 2001 by the Brazilian Architecture and Urbanism Education Association (ABEA, 2001), no other event was organized, ractifying this scenery and weighting a professional "habit" of teaching disarticulations between theory and project practice. As shows Santos (2003, p. 113), "discussions concerning curriculum, though always consider the definition of a desirable professional profile, have not been able to qualitatively change their impact over professional insertion of architects. Despite political and pedagogical projects indicate new postures for the transformation of the architect's role in society, traditions and architecture field beliefs, or what Pierre Bourdieu calls the *professional habitus*, impregnate of such way the curricula that such guidelines end up being just rhetorical; its effect is more negative than positive, since they are considered but not implemented, they cushion the discomfort of dissociation between education and reality and they bring a false relief that the problem is being addressed, although it doesn't cause any effect".

4. Conclusion

The recent urbanization of humanity and the modification of means for producing, a process developed in history since 18th and 19th centuries, acquiring a new emphasis from the mid of 20th century, demanded a gradual increase of energy consumption to meet demands for comfort and urban well-being. In a perspective of apparent inexhaustibility of natural resources, social and economical development was allowed in the last century in a way that could fully satisfy certain social groups. It has been a contemporary constant, however, to inform us nowadays the unsustainability of these long-term practices.

In this framework, if we think architecture as a social product, and architects, as the agents responsible for its production, architects needs also to be responsible for the development and gradual adoption of mechanisms – technological, legal or institutional – which might entail the renovation of production process and ensure energy preservation and efficiency. Educators have a key role on this since "in the creation of thoughtful pratitioners we must be sensible to *how* people learn as much as to *what* they learn, taking into account their skill sets, carreer structures and the specific requirements of their work. In the domain of international training, we need to be mindful of the socio-cultural and political constructs that profoundly influence information transfer and the authority to make decisions. Within the academy we atrive to train flexible and resourceful professionals who are able to engage with multiple disciplines and yet who possess a foundation of specific discipline." (Cody & Fong, 2006, p. 272)

Therefore, in this new era of information, teaching had already become a mediation of knowledge (Freire, 1996). A mediation that is also part of cultural heritage social function towards memory and identity values of a given society. That´s why the Charter of Architectural Education, published in 2011 by UNESCO and UIA (2011, p.6) affirms: "architectural heritage education is essential to understanding sustainability, the social context and sense of place in building design, and transforming the professional architectural mentality so that its creative methods are part of a continuous and harmonious cultural process".

Thus, as a fundamental synthesis of design process, the architectural project is by excellence where these new concepts are the most important. Slowly impacted by different demands, often elaborated indirectly in disciplines that qualify and offer basic tools for training and professional architectural practice, the architectural design changes. For example, the growth of regulatory tools to support design procedures in the areas such as thermical comfort,

construction quality management and recovery of urban structures, among others, are clear expressions of a gradual process of architecture renewal in the 21th century.

Although architectural preservation is a subject of this contemporary movement, it has a long previous path before. Especially, in Brazil, it is linked to primary studies of Brazilian architectural history, and more recently, to memory, focusing an attention that lies constantly on the humanities field, which determines a different axis of interpretation – particularly in schools' curricula. Instead, preservation is widely developed abroad, especially in Italy, in which the discipline that now constitute its base, the restoration, include fields with a whole range of multidisciplinary studies – that can be easily be associated in architecture and urban design undergraduation disciplines horizontally and vertically – to provide skills and tools for intervention in the cities integrated to the fundamental principles advocated by several theorists or examined by the traditional *on site* practice.

In this sense, although the association between new architectural design methodologies is desired (and part of the same longing), the Brazilian dichotomy lies on the means to better qualify architect's education – still attached to institutional curriculum barriers – combined with the various forms of architectural intervention that could grant architectural design its required sustainable component. On a daily basis, they are hardly combined coherently.

As stated by Edgar Morin (1999, p. 16), "we should therefore think about the problem of education, considering, in one hand, the increasingly and severe effects of knowledge partitioning among the inability to link them to each other; in the other hand, the ability to contextualize and integrate is a fundamental quality of the human mind, which needs to be developed, not atrophied".

Thus, to conclude, the "Retrospective Techniques" – in a context of enlargement of built environment importance and the role given to the history of traditional production techniques to architectural design – cannot alone satisfy contemporary demands. As a discipline, it cannot be isolated but integrated inside all architectural education. One way for a broader resolution of this problem must be given on emphasize the relevance of preservation to future architects and find ways to develop it as a potential field for architectural creation.

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