

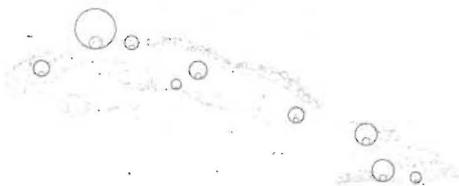
# Havana Lessons

Havana represents a case of special interest for urban research; the development and expansion of the city virtually came to a halt after the Cuban revolution in 1959. Therefore the urban structures of the past have been conserved to a large extent.



Calzada 10 de Octubre

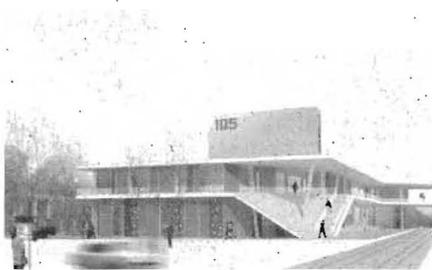
But today Havana is a city on the brink of change, experiencing the demand for intense development and restoration of its built substance. The focus of attention generally lies on the historical centre and the areas adjacent to Havana's attractive coastline, whilst the workaday Havana is in peril of falling behind in its development.



Graph showing necessity of residential development

The authors of this publication draw attention to one of the important zones of the popular Havana, the municipality of "10 de Octubre" (10DE10). An urban study and planning proposal for its future evolution was conceived in the academic year 2006/2007. The proposition for

the urban reinvention of 10DE10 is the result of the teaching collaboration of the Laboratory for the production of architecture (lapa), at EPFL, Switzerland, the Faculty of Architecture at the Technical University of Havana (CUJAE) and the Centre for Urban Studies of Havana, Cuba (CEU-H).



Project for Fire & Train Station on Calzada 10 de Octubre

The authors introduce the characteristics of the municipality of 10DE10, as well as the inherent problems and potentials of the site. The Urban Constitution for 10DE10 outlines the objectives for future urban development within the municipality.



Workshop in Havana, February 2007

This urban planning proposal is then illustrated by a series of architectural projects. The publication concludes with a series of texts by different participants and experts which comment on the site conditions and the project process.



### The project process in Havana: A space for pedagogical innovation *Adriana Rabinovich*<sup>1</sup>

During the 2006–2007 academic year, the Laboratory of Architectural Production (lapa) of the Swiss Federal Institute of Technology at Lausanne (EPFL) was the scene of an innovative training experience. Recognition of its innovative character is primarily based on the clear stance taken by the teaching team with regard to the purpose of the teaching–learning process<sup>2</sup>, a relatively rare occurrence in university teaching targeting professionals who intervene in the city.<sup>3</sup>

This purpose is related to the exploration of innovative pedagogical strategies making it possible to develop the requisite skills for professional practice in the future architects. As far as the lapa is concerned, this pedagogical goal presupposes approaches which can do justice to the increasing complexity of urban development, the lack of consensus as to what could be deemed an appropriate response,

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2 Presented in the chapter entitled "Teaching and research in architectural education: Introduction" of this book.

3 Part of the analysis presented in this contribution is based on the reflections of the author spanning a period of more than 20 years in the context of her teaching and research activities in various countries, her participation in training programmes on project-based activities and, more recently, the research conducted in connection with the NCCR N-S and the elaboration of the general guidelines of UNESCO's Urban Professionals programme. In this regard, we wish to pay tribute to the work done under the guidance of Prof. Andrea Catenazzi, who has developed a series of innovative aspects of the teaching–learning process in this field (see Catenazzi 2003, Catenazzi, da Representação, 2006). The present analysis focuses on some of these aspects which are relevant to the academic experience of the lapa.

and, hence, the numerous challenges inherent in any complex intervention involving a host of actors.

In general, the lapa's approach is characterized by the pedagogical assumption that the point is to construct knowledge within the framework of educational experiences rather than transmitting finished knowledge. In this chapter, we shall emphasize some innovative aspects of the teaching–learning process implemented in connection with the case of the Municipio 10 de Octubre in Havana. We shall revisit the relevant stages in the process described in the previous chapter, focusing, from a pedagogical perspective, on defining the content with regard to the process of urban intervention, based on the stages of the personal teaching–learning process.

The aim therefore is not to evaluate or qualify the products – plans and projects – elaborated for the city of Havana. Rather, the purpose is to further reflection on teaching future urban professionals, via an analysis of concrete strategies implemented by the lapa. These same strategies promote the development of the necessary skills for project-based praxis by university students, on the urban and architectural scales, in the context of widely differing social realities. This in turn allows the students to discover and comprehend other realities than their own everyday lives and to broaden their horizons with regard to the possible frameworks for intervention in professional practice. In the case of Havana in particular, the teaching–learning process provided an opportunity to discover the urban policies related to a socialist system, based on public and social control of the means of production by the State, through land tenure and urban investment.

### Training reflective practitioners

Teaching processes in the field of architecture are gearing to training professionals who are capable of doing more than merely analysing the complexity of the territorial dynamics in which they will

## Havana Lessons

have to operate. As architecture is a profession that combines thinking with know-how, teaching in this field is simultaneously geared to developing skills for transformational action (Catenazzi, Da Representação, 2006).

In the case of the lapa, the goal of the course is to tackle the field of architecture and urban planning from the point of view of “praxis”, that is, from the practical application of knowledge to reality. The teaching–learning process is primarily aimed at helping future architects develop skills for elaborating projects for intervention on the urban and architectural scale. Accordingly, the courses offered incorporate training processes where students are confronted with real-life problems, as work situations in which they learn to rely on “reflection-in-practice” geared to project praxis, that is, to the design dimension. Such processes are based on case studies as real problems that reflect the specificities of urban development and help students learn to take decisions using a logic of intervention.

The notion of reflection-in-action involves looking to personal experiences, connecting with own feelings, and attending to own theories in use. It entails building new understandings to inform their actions in the situation that is unfolding. This process of thinking must also be linked with reflection-on-action, which makes it possible to spend time exploring why we acted as we did, what was happening in a group, thus, to develop a set of questions and ideas about our activities and practice. As Smith points out, there is a clear relationship between reflection *in* and *on* action, as people draw upon the processes, experiences and understandings generated through reflection on action. In turn, things can be left and returned to. The space afforded by recording, supervision and conversation with peers for example, allows approaching this (Smith, 1994, 2007).<sup>4</sup>

<sup>4</sup> For further details on the debate between reflection in action and reflection on action, see Schön, 1983, 1985, 1987; Smith 1994; Eraut 1994; Usher et al. 1997).

## Positions

Developing capacities for reflection-in-practice and reflection-on-practice takes due account in reality of a characteristic pedagogical approach that is widespread in teaching in the field of architecture and is closely related to the training of “reflective practitioners”, that is, professionals operating in areas outside the bounds of technical rationality.<sup>5</sup> In this way, students of architecture learn by doing, with the help of other, experienced professional practitioners (Schön, 1987).

### “Grasping” the Latin American cities

Learning is a complex process in which each subject re-represents reality on the basis of a unique personal reconstruction. In the field of urban planning, there is a need to transmit knowledge allowing students to grasp the complexity of urban dynamics and develop skills that will enable them to intervene in these dynamics through plans and projects, tackled from a multidisciplinary and multisectoral perspective. This constitutes a relevant challenge for university students in whom skills are developed within the framework of the organization of knowledge by discipline.

To take up this challenge, the lapa combines analytical research methodologies with creative design, developing investigative processes for urban planning and architecture.

For example, the cycle of lectures “lapa lessons” given by outside experts from different disciplines afforded the students and the teaching team an opportunity to become acquainted with the complex urban realities of different Latin American cities – Curitiba, Caracas, Bogotá and Havana, as well as Miami. In a second phase, the theoretical knowledge conveyed as a tool for analysis was tapped by

<sup>5</sup> The idea of a reflective practitioner is a general notion which takes different forms in different fields and in the cultures of different professions.

## Havana Lessons

means of work in teams, to which students were assigned as “specialists” on different topics / problems: health, housing, transportation, food and education. These topics had been selected in advance by the teaching team and the group of outside experts for their relevance to the different cities studied and, in particular, to the shaping of urban policy in Havana. Each team was tasked with delving into the topics selected, in relation to the cities analysed. The students were responsible for working out on their own strategies for gathering and analysing data, in order to establish a “database” for each of the cities studied. The resultant group analyses were presented to and discussed with the teaching staff and the panel of experts. This type of dynamic encourages the development of analytical skills within the framework of spaces for exchange and discussion which help students grasp the manifold dimensions of urban problems and better understand the different sectors of intervention.

Accordingly, in this initial phase pedagogical instruments were incorporated which made it possible to mobilize knowledge in complex situations, simultaneously creating relationship modes between theory and practice. The pedagogical approach was based on recognition that theory is not the only useful form of knowledge and that consequently, it is not up to teachers to simply pass on researchers’ research findings. The relationship between theory and practice in the teaching–learning process facilitates the development of logics for acting in situations of uncertainty which are characteristic of the design processes (Schön, 1987) and encourages the elaboration of knowledge and skills that are directly related to professional practice.

### Designing responses to “wicked” problems

The second stage in the teaching–learning process we would like to highlight focused on the shaping of urban planning capacities on different scales: that of the city, that of the Municipio, that of the urban

## Positions

sector. Work-based training relying on case studies makes it easier to learn how to make decisions with a view to moving forward in designing answers to urban problems with real actors and problems which change depending on the point of view of the person defining them. In the field of urban planning and architecture in particular, the challenge consists of devising pedagogical approaches for the development of complex skills enabling future professionals to take decisions aimed at providing answers to “wicked” problems.

It will be recalled that, some decades ago, the work of Ritter and Webber showed that urban and architectural problems cannot be dealt with as “tame” problems, that is, on the basis of processes in which an exhaustive formulation can be stated containing all the information the problem-solver needs for understanding and solving the problem. On the contrary, with “wicked” problems, all of the information necessary for understanding the urban problems is closely related to the possible answers (Rittel, Webber, 1973). This in turn points to the need to elaborate new modes for the production process.

There is a need to consider, for example, that a large share of decisions relating to the design process cannot be taken – above all if they involve outside actors – until the basic principles of the solution are known. “The classical systems approach is based on the assumption that a project can be organized into distinct phases: understand the problems, gather information, synthesize information, work out solutions and the like. For wicked problems however, this type of scheme does not work. One cannot understand the problem without knowing about its context; one cannot meaningfully search for information without the orientation of a solution concept; one cannot first understand, then solve” (Rittel, Webber, 1973).

The project activity must be viewed as the production of knowledge by means of a recurrent process of conjectures and refutations between the different actors involved in the production process. The project is in itself an instrument for seeking to define problems, not just find answers. Thus, during the initial project phases, the elabo-

ration of conjectures and the definition of the problem move forward simultaneously, not one after the other.

Various properties characterize urban architectural production as activities for seeking answers to wicked problems, according to Rittel and Webber (1973):

- There is no definitive formulation of the problem;
- Problems have no stopping rule as there is no criteria that tells when *the* or *an* answer has been found;
- Every problem is essentially unique as despite strong similarities there is always an additional distinguishing property to each wicked problem;
- Every problem can be considered to be a symptom of another one; one should not try to cure symptoms and therefore, one should try to settle the problem on as high a level as possible;
- Solutions are not true-or-false but good-or-bad as judgements are likely to differ widely to accord with group or personal interests, value-sets and ideological positions;
- There is not an enumerable or exhaustive set of potential solutions or answers; it is a matter of judgement whether one should try to enlarge the set of alternatives and which one has to be implemented;
- The choice of explanation determines the nature of the problem's resolution; the discrepancies are linked with the analyst's "world view";
- There is no immediate and no ultimate test of a given answer, as any solution, after being implemented, will generate waves of consequences over an extended period of time;
- Every attempt counts significantly as every implemented answer is consequential; it leaves "traces" that cannot be undone;

Consequently, approaches to wicked problems should be based on a model of planning as an argumentative process in the course of which an image of the problem and of the answer emerges gradually

among the participants, as a product of incessant judgement subjected to critical argument. Therefore, as Schön explains, the practitioner carries out an experiment which serves to generate both a new understanding of the phenomenon and a change in the situation.

Various pedagogical instruments no doubt helped in taking up this challenge so that, paradoxically, innovation in this phase, the outcome of which was the Urban Constitution (UC), might be associated with the old statements we have just enumerated.

First, there was a pooling of the experience which students acquired while analysing the various Latin American cities in collaboration with the teaching team and the outside experts. This brings us back to the notion of “experts” who, organized into single-topic groups, were responsible for analysing each of the topics assigned on the scale of the city of Havana. In turn, this analysis gave rise to the elaboration of the first alternatives for solutions to each problem, the first “conjectures” on the scale of the Municipio 10 de Octubre. The outcome was five group products in the form of response strategies to problems of health, housing, transportation, food and education. This first process of conjectures and refutations allowed the students to deepen their understanding of the urban problems they had to face. As with the previous group products, the thematic strategies were presented and discussed collectively inside the lapa, with input from the panel of outside experts.

The analysis of the various problem-related aspects, which combined the development of analytical skills with design, represented a collective input via the drafting of the first “Urban Constitutions”. As presented in the previous chapters, these are a sort of pact which defines the aims of development. For this purpose, five groups of students were formed recently, composed of different thematic “experts” tasked with a single mission – drawing up an Urban Constitution on the scale of the Municipio.

In terms of analysis, one interesting aspect was the level of transformation action in the reality of the different conjectural propos-

## Havana Lessons

als, especially those focused on a thematic aspect on the scale of the Municipio, most of which appeared as clearly delineated answers to a pressing reality. As the students became aware of the limited resources and the strict sectoral administrative regulations, for example, this no doubt determined the feeling of “limited freedom to propose” as far as the different groups of experts were concerned.

It is clear that with “wicked” problems, there are no “right” or “wrong” answers to urban challenges. At the same time, it is difficult to determine who is empowered to evaluate the quality of such answers. However, the discussions on the proposals drawn up highlighted the need to incorporate new arguments into the process for defining the problems which the students faced. The trip to Havana was intended to provide the necessary elements for the next step, confirming in turn the relevance of the time limits set for the teaching-learning process. For the first time, the students, including the majority of the teachers, came into direct contact with the reality in which they would be operating.

### The Urban Constitution

Already in Havana, the Urban Constitutions of the students from the lapa were presented and discussed with the local counterparts, strengthening their exploratory nature as part of the process of defining the urban problems to be tackled. These “conjectures”, formulated on the basis of a series of basic data obtained by the Swiss students through various sources, thus went beyond initial diagnosis. Their proposal-oriented nature facilitated the development of a programmatic phase in the drafting of the Urban Constitution, by means of the inclusion of instruments and working modes specific to the design phase, that is, the design activity.<sup>6</sup>

With a view to promoting the formation of working groups composed of Swiss and Cuban students, the teaching strategy once

again took up the analysis and elaboration of thematic proposals which had preceded the first Urban Constitutions. This strategy also helped ensure a level playing field for both groups of partners: the students from the lapa would better understand realities in Cuba, while the Cuban students would rely on praxis to understand the lapa's approach.

In addition to strengthening methodological training to solve wicked problems, the work done in Havana enabled the students from the lapa to develop certain specific skills. First of all, the ability to incorporate the dimension of individual experience with regard to the case and the problem taken up – an invaluable lesson from a teaching perspective. Second, the ability to exchange views with students, teachers and local experts, within the framework of indispensable diversity with a view to promoting processes which enhance the value of difference in collective production. Third, the ability to compare with local counterparts the social utility of academic training in the field of urban planning in different social realities. This points to a need to face diversity in the scope of training which is designed to encourage responsibility and which implies the development of social awareness, shared responsibility for solving priority problems and a commitment based on solidarity to tackle such problems.

The collective outcome of an urban strategy was the Urban Constitution (UC), developed by Cuban and Swiss students, teachers and experts as a tool for defining the urban problems analysed. Following the drafting of the “text of the constitution”, that is, the laws which would collectively define the development goals of the

6 The notion of a programmatic phase was developed in the 1980s by French experts, as an innovative approach for the initial phases of urban architectural production. From a methodological point of view, this work was related to the notion of “wicked” problems developed by Rittel and Weber, among other. See Sechet 1989; Conan 1989, 1990; Prost 1992.

## Havana Lessons

municipality, the UC took the form of an intervention blueprint – a sort of zoning scheme. This instrument was prepared by groups which selected and worked in different sectors of intervention, related to a certain extent to the notion of urban projects. Drafting a single collective outcome facilitated the development of skills for defending and negotiating different modalities for the interpretation of urban reality and for the definition of positions with regard to possible modes of intervention. The debate basically focused on the role that Havana played in the urban structure, not only at the national level but also at the international level. Although the Swiss and Cuban teams agreed on the need to maintain the spatial and morphological qualities of the municipality, views differed as to the need to strengthen Havana's relevance. The project helped teach students how to take decisions based on critical, pluralist attitudes with an ability to develop proposals for change.

### Architectural intervention

Once they returned to Switzerland, the lapa students set out to draft, individually or in groups, architectural projects on different themes, based on the selection of the different sectors of intervention defined in the UC. In this second semester, the teaching–learning process was relatively “traditional”, with considerably shorter deadlines. Teaching activities focused on the development of architectural project skills linked to the creation of architectural concepts and their development, with the project stages following in linear progression.

If we take the results of this second semester as a starting point, it is interesting to note that the projects do not appear as heavily circumscribed answers to contemporary reality in Cuba. The “possible”, which was very present in the first thematic proposals at the urban level, was apparently giving way to the “desirable”. Members of the

teaching team came up with the hypothesis that the desire to play the part of “artists”, which was to a certain extent contained during the teaching–learning phase of urban planning, could be seen in the students in this last stage.

Once again, the point should be made that these proposals in response to “wicked” problems preclude possible evaluations of right or wrong answers. Judgments as to what can be deemed satisfactory, adequate or even “creative” or “innovate” differ according to personal or collective interests linked to different value systems. However, from the training process onwards, the relevance of the projects, as answers to the problems encountered, was analysed in relation to their adaptability to and respect for the UC.

In this connection, and from a pedagogical perspective, the architectural projects must be viewed as “conjectures” for possible interventions stemming from a collective process constructed together with Cuban stakeholders. Even though the projects are doubtless unfinished and not yet implemented as solutions, they constitute a new link in the chain of efforts to define the problems facing Havana and the Municipio 10 de Octubre in particular.

The projects’ primary value is that they fuel the architectural debate in Cuba that was launched in the 1960s, on the need to produce creative social architecture as a cultural product with aesthetic values, developed in response to the overall needs of the population and attuned to local conditions of production. All of these ideological intentions have, to a certain extent, in the field of housing, education and health, for example, been subsumed under the pragmatic immediacy of standardized solutions throughout the island (Rabinovich, 2007), as a result of which these intentions have achieved goals which, in other countries, have remained empty words. Yet the collaboration with Cuban colleagues highlighted the fact that the debate has not disappeared and that it is possible and relevant to maintain spaces for discussion within certain professional and academic bounds in Cuba.

### Closing notes

This contribution stems from the desire to participate in the reflection on teaching–learning processes in the field of architecture and urban planning, based on the pedagogical experience of the lapa. Thus, we investigated some aspects which we consider innovative in relation to the 2006–2007 academic year focused on the case of the Municipio 10 de Octubre of Havana, Cuba.

With regard to activities linked to urban planning, we have seen that the various stages of the pedagogical process leading to the drafting of the Urban Constitution took on the proposal-oriented nature. These same stages were situated in relation to the development of analytical capacities along with others geared to intervention, thereby promoting, from a teaching perspective, the development of the necessary skills to solve wicked problems. This made it possible to move ahead in an innovative fashion in building the reality for which the project was meant – reality as a situation which has not only institutional, social and cultural dimensions but also an economic side and which lends itself to transformation. The challenge was to change the course of the urban processes, defining interventions based on a global strategy which includes and mobilizes the relevant actors.

In this connection, putting into action the capacity to reflect on praxis was developed in different scenarios of group interaction, in the form of exchanges with students, teachers and local and foreign experts. This helped develop the key skills for such proposals suited to intervention in changing and highly complex situations, thereby reducing the risk of any reductive interpretation of reality.

At the same time, tackling cases as working teams implied that those who participated on the basis of shared responsibility were capable of constructing their own perspective of knowledge and comparing it with others' perspectives. This in turn made it easier to understand that there are personal tendencies which

## Positions

influence the way in which we perceive situations, reflect upon them and come to conclusions which underpin and guide possible transformational action.

Lastly, it is important to remember that the development process helped nourish spaces for discussion on urban planning and architecture in Cuba, without forgetting that the lessons learned also promote innovation within the scope of the teaching of architecture, geared to professional practice with a strong linkage to pressing social needs in different latitudes.

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## Teaching and Research in Architecture

Today the question of teaching architecture and of research in architecture is pertinent. The role of the architect in the building trade is changing rapidly and the profession needs to define and defend its realm of influence. The formation of professionals will have an impact on the direction of the profession in the future. This publication presents the teaching methodology of the Laboratory for the production of architecture (lapa) at the EPFL, Switzerland. The approach to teaching in architecture at lapa is informed by the procedures and project experience of international practice and the desire to establish a comprehensible and trans-disciplinary culture of analysis and design in architecture.

The application of the teaching method is exemplified by the study of “10 de Octubre”, a large popular municipality of the city of Havana.

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