

Teaching and Learning Urbanism in Architecture Schools

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Abstract

How are approaches and tools changing to deal with critical territorial challenges, particularly risks associated with climate change, the spatial dimension of the economy and the networked metropolitan region? Are urbanists equipped to lead solutions to our society's challenges to sustainability? Learning is a puzzling act, and the learning of a discipline like Urbanism is a particular one. This is because of the interdisciplinarity that this field requires in actual society. In many Schools of Architecture, it is find the nostalgia of the urbanist locked in a knowledge and skills that hardly seems to be practical versus the panorama of uncertainties and new possibilities in which we live. Therefore, it is appropriate to face how the urbanist education is responding to the constant changes and challenges. Studying the current educational processes involves the theoretical contextualization of the educational act, the educational discourses and a revision of the evolution of its structure. This research focus first, on a historical journey to discern its evolution, to know what was the main necessity and the competences needed for the practice. Second, a comparative study is made of different study plans to overview of how Urbanism is taught in different regions, the approaches and structure. Third, it is concluded which are the gaps, difficulties and opportunities. The relevance of this study is the redefinition of the studies of Urbanism in relation to the demands of society, the environment and the progress of pertinent situations.

Keywords: Urbanism, Sustainable Cities, Higher Education, Interdisciplinary, Society's Challenges, Architecture Schools

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Introduction to the Origins

The field of Urbanism is an important part of the sustainable development and has an immediate effect on the challenges society is facing. Cities are at the forefront of global socio-economical change. Half of the world's population now lives in urban areas and the other half increasingly depend upon cities for economic, social, cultural and political progress (Cohen, 2006). How can we create sustainable, inclusive and creative cities in today's urban age? This is not about good urban amenities. Urbanists also need to take fully into account migration, integration, cultural diversity, environmental management, easy access to services, protection of natural resources, sustainable urban water supply, more efficient energy and a full spectrum of cultural activities that acknowledges and embraces diversity. For this, it is envisioned to catalyze a cultural shift in the Schools of Architecture, breaking the partial vision of sustainability and moving to a new paradigm with the goal that future graduates act as agents of change to solve the challenges of our society.

One of the reasons this study focuses on the Urbanism courses is because is less studied than Architecture Design courses and it's scale of impact. Most of the studies published about the Education in Urbanism in Europe are not updated and must be reviewed. Therefore, the following bibliography and reflections are taken into consideration for their contribution in this subject.

The chosen theme for the number 2 of *Ciudades* (Muzio, 1995) is the teaching of Urbanism in the Architecture schools, from a European perspective. Is composed of three articles with the opinion of Spanish professors and four foreign teachers, each referring to their own country. Ten years after almost the same title was given to the number 10 of *Urban* (De Terán & Sánchez de Madariga, 2005). *Un Urbanismo Docente* (Font Arellano & Lopez De Aberasturi, 2009) not too far from this, grouped teachers and professionals of Urbanism with the purpose of explaining the ways of intervening and imparting the teaching of the Urbanism for the last thirty years. Among the reflections of these books and articles, the main ones are:

Integration and interdisciplinarity

- The possibility of a reorientation of the teaching towards a culture that considers the urbanistic, architectural and landscape; and in which both the urban plan and the architecture project coexist.

Actual problem-solving

- Abandoning the spatial model to the result of market forces, with the consequent renunciation of the comprehension of globality, limiting the intervention to the urban fragment where only morphological approaches can have room, implies to hinder the theoretical elaboration and in the long term the own advance of the urbanistic discipline.
- The planning approach manifests itself in raising awareness about the cost of decision-making processes and on the need to provide an articulated response to citizen demands, as well as the social and environmental impact of the execution of plans.

Culture and History Influence

- The influence of normative development on the delimitation of a professional field so narrow for architects has led to its distance from the practice of urbanism. The limited cultural and urban formation of the architects is a cause added to this distance.
- The problem of employment or unemployment in relation to architects and/or town planners is not considered in all articles, despite the controversy over their structural condition, in view of the future reorganization of the profession. Absent in the articles of Spain and Italy, is central in those that analyze the case of Germany and Great Britain, in which it is related to the search for a greater professional qualification.

Lack of actualization

- The "classic" experiences have been losing their validity without being renewed or replaced by recent experiences that can be considered new models.
- The "adjectivation" of the urban environment is a symptom of the current contradictions, in which an implicit renunciation to the global understanding of the urban phenomena is manifested.

This leads to consider practical learning as a necessary complement to the studies and their sustainability and chains to consider professional structuring and the study of the sustainability in the education of Urbanism. For this, *Urban Design* (Krieger & Saunders, 2009) is taken for reference to study from the origins of the discipline. Is important to understand the history to know what the main necessity of this discipline was, the competences that are needed for the practice, the actual gaps in the discipline and opportunities to make it sustainable.

To understand the gaps and opportunities to make the discipline of Urbanism sustainable and to rethink urban engagement, a reference that is studied is *Urban Sustainability in Theory and Practice* (James, 2014). By identifying the key aspects of transformation towards sustainability at University, some cases from seven universities world-wide are studied (Ferrer-Balas et al., 2008). Some of the main findings are:

- 1) The main barrier to overcome is the lack of incentive structure for promoting changes at the individual level. The main drivers for change are the presence of "connectors" with society, the existence of coordination bodies and projects, and the availability of funding, all of which are important for progress.
- 2) Enhancing interdisciplinarity is a strategic objective at almost all of these universities, while transformative learning is less present.
- 3) A common characteristic for most of the institutions is establishing and supporting networks of expertise within the universities.
- 4) The University, as an institution dedicated to the creation and diffusion of knowledge through research and teaching, plays a leading role in the dissemination and application of possible solutions and alternatives to the social, economic and environmental problems facing current society.

In the Spanish context, in September 2002, the Conference of Rectors of Spanish Universities (CRUE) approved the proposal for the creation of the Working Group on

Environmental Quality, Sustainable Development and Risk Prevention in Universities (CADEP), currently Commission Sectorial CRUE-Sustainability (CSCS). The purpose was to promote initiatives related to risk prevention, management, participation and environmental awareness in universities, as well as inter-university cooperation in these matters.

The CSCS approved in 2005 the document "Guidelines for the Introduction of Sustainability in the Curriculum" in Universities. This text, prepared by the Working Group on "Curricular Sustainability" (GTSC) of the CSCS, proposes general criteria and recommended actions for the curricular sustainability in the Spanish University System (SUE). This process (CADEP-CRUE, 2012) involves a change in curricula to provide students with the transversal skills necessary to:

- 1) understand how their professional activity interacts with society and the environment, locally and globally, to identify possible challenges, risks and impacts;
- 2) understand the contribution of their work in different cultural, social and political contexts and how they affect the same and the socio-environmental quality of their environment;
- 3) work in multidisciplinary and transdisciplinary teams to solve the demands imposed by socio-environmental problems derived from unsustainable lifestyles, including proposals for professional alternatives that contribute to sustainable development;
- 4) to apply a holistic and systemic approach to the resolution of socio-environmental problems and the ability to go beyond the tradition of decomposing reality into disjointed parts;
- 5) participate actively in the discussion, definition, design, implementation and evaluation of policies and actions in both the public and private spheres, to help redirect society towards a more sustainable development;
- 6) apply professional knowledge in accordance with ethical principles and universal ethical values that protect human rights; and
- 7) to collect the perception, demands and proposals of citizens and allow them to have a voice in the development of their community.

The GTSC has detected the difficulty of professors to integrate these concepts in the different subjects, regardless of their area of knowledge, since it requires an interdisciplinary and innovative practice (Barrón, Navarrete, & Ferrer-Balas, 2010). Recent studies show the efforts to implement sustainability in Higher Education, but it is an area of research and emergent action, in which the lack of common criteria on the competences to integrate, their promotion and evaluation in University degrees still constitutes a limitation (Ferrer-Balas et al., 2008; Lozano, 2011, 2014; Segalàs, Ferrer-Balas, Svanström, Lundqvist, & Mulder, 2009).

Therefore, relevance of this study is the redefinition of the studies of Urbanism in relation to the demands of society, the environment and the progress of pertinent situations. This allows defining a frame of reference for common reflection. The discipline of Urbanism needs a commitment to reality and confrontation with the society to which it belongs, without renouncing its ability to propose independently of the apparent demands of the market.

Competences for the Practice

Urbanism is an old practice, which had brought together a multiplicity of professionals: architects, economists, geographers, engineers, sociologists and urban planners. However, Urbanism as a profession is relatively new. Its theoretical maturity was reached in the twentieth century, like a combination of different disciplines that were merged to rethink the city and build the discipline of Urbanism. We can take some interesting extracts from The First Urban Design Conference (1956) where people engaged in thinking about the future cities, where different authors participated, like Jane Jacobs, Edmund Bacon, Lewis Mumford and several leaders of the soon-to-be formed Team 10, narrated about the origins and intentions of the discipline (Krieger & Saunders, 2009):

- Jose Luis Sert (Figure 1L) said, "...Meanwhile, city planning has developed as a new science; city planners today are concerned with the structure of the city, its process of growth and decay, and the study of all the factors— geographic, social, political, and economic— which have shaped the city." It was a time when specialists in the field started to study more about the problems of our cities adopting new methods of research and analysis, emphasizing more in the scientific phase more than the artistic one. "This may be due to a natural reaction against past practice, when city planning was based on the superficial "city beautiful" approach, which ignored the roots of the problems and attempted only window- dressing effects."

- In the same line, Edmund N. Bacon (Figure 1M) said, "...We have the three principals: planning, architecture, and administration. What we lack is the capacity to function as a whole. Architects have fashioned almost the entire extent of their resources on the designing of individual buildings. The planners have tended to confine their efforts to the creation of broad and unmaterial concepts such as zoning, land-use control, density standards, and criteria. The administrators and policy makers, who really set the basic form of the urban environment, commonly regard the architectural aspect as something you purchase at the end."

- Eric Mumford relate the emergence of Urban Design in the Breakup of CIAM (Figure 1R) refer to the conception of the "architect- planner: "someone who could organize the "mutual relation of parts" involved in urbanism instead of focusing on the design of any individual part."



Figure 1: L: The 2006 issue No. 24 of *Harvard Design Magazine* celebrates the 50th anniversary of the Sert conference. M: Edmund N. Bacon in the cover of *Time Magazine*, Nov. 6, 1964. R: *The CIAM Discourse on Urbanism 1928-1960* (Eric Mumford, MIT Press, 2002)

Something that is common with these asseverations is the linkage with other disciplines like geography, anthropology, ecology, architecture, psychology and sociology that are all under the umbrella of the 'relation human-environment'. The tension between objective and subjective explanations is one of the fundamental keys that operate in the different disciplinary approximations. The objectivism emphasizes the role of the environment like the configurative object of the human being, and el subjectivism the role of the human being like a sensible subject, active or modifier of the environment (Romañá Blay, 2004). Is about finding rules or patterns adequate to each society or group of humans.

In the book *Urban Spaces, Public Spaces* (Carmona, Heath, Tiesdell, & Oc, 2010) asserts that in Urbanism are four significant themes: is for and about people; the value and significance of 'place'; operates in the 'real' world, with its field of opportunity constrained and bounded by economic (market) and political (regulatory) forces; and the importance of design as a process. Other specialists in this discipline as Manuel de Sola-Morales describe three main aspects: permeability, sensuality and respect. Among others theorist that attempts to identify the desirable qualities of a successful framework, is also Kevin Lynch that identified five dimensions: vitality, sense, fit,

access and control. It can be said that is about constructing a scenario for urban evolution, imagining the conditions of transformation and proposing a process capable of incorporating new experiences.

How has it evolved? In the book *Public Places-Urban Spaces* (Carmona et al., 2010), describe three historical eras where the cities and settlements have evolved through marketplaces, centers of industrial production and centers of service provision and consumption. At present, it is a merge of the three, but with a greater degree in service production and consumption. It presents the diversity of contemporary urban development processes and urban design ideas:

1) Traditional urbanism (Figure 2L): grids, public squares, moderately dense housing and pedestrian corridors. Based on a critique of the 'placelessness' of the modern vehicular city and of urban sprawl, it attempts to recover what it regards as a more 'authentic' urban framework.

2) Conceptual urbanism (Figure 1M): adopts a more radical attitude, mix the assumptions of 'what the city was, is or should be', and welcome 'fluid instabilities' of cities as well as their 'inertia of material residue'. Instead of denouncing the 'chaos and congestion' of contemporary urban life, it 'experiment out from disruption and disorder'.

3) Marketplace urbanism (Figure 2M): 'immense financial, technological and political energies' emerging at 'those nodes of dynamic intensity merging around the intersections of major freeways, on thousands of acres of farmland or wasteland, on the borders of existing cities'.

4) Social urbanism (Figure 2R): a critique of most aspects of contemporary US cities, like the 'uneven consequences' of commodity capitalism. Highlighting areas of the city that 'capital ignores'.

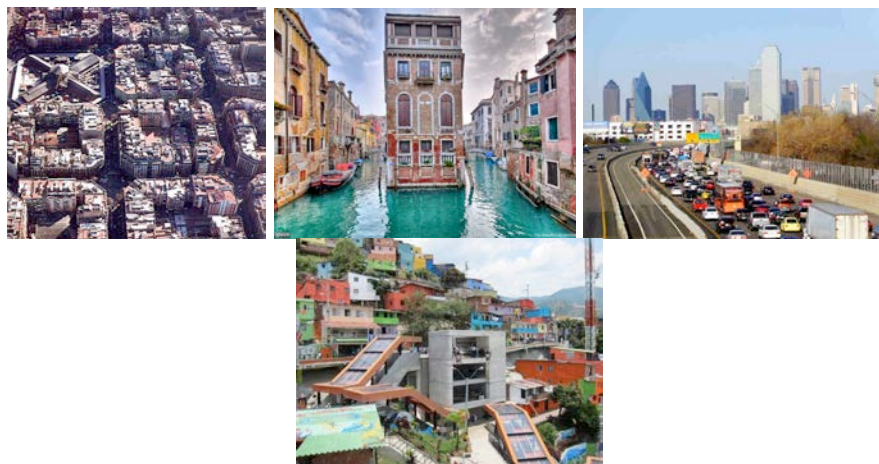


Figure 2: L: Traditional urbanism. M1: Conceptual urbanism. M2: Marketplace urbanism. R: Social urbanism.

It can be said that traditional urbanism and conceptual urbanism suggest contrasting ideas. Marketplace urbanism is about the forces shaping contemporary urban form, while social urbanism is a critique of the contemporary urban condition. How will the future urbanism be different from now? We do not know yet. William Mitchell

argued, “The impact of the digital revolution will redefine the intellectual and professional agenda of architects, urban designers, and others who care about the spaces and places in which we spend our daily lives” (Mitchell, 2000). Not far from what we are living now, as he said this on 2000. This, together with global warming, contamination, urban sprawl, among other new variants, may also provoke radical change. Urbanism is not a passive reaction to change, but a relationship between the physical characteristics of a city, and its functional, socio-economic and environmental qualities (Carmona et al., 2010).

How is the discipline of Urbanism nowadays? The deep physical, social and cultural changes that we are experimenting forces the contemporary Urbanist to a process that opens recreate the discipline. Even processes that are now a common instrument, like the computer, have opened a new world to the Urbanism, through new forms, new perspectives and new ways of analyzing data. However, this has provoked questions about the nature of the urban project, about the way is manage the synthesis of the analysis and the compatibility between the physical, mental and social order. The practice of Urbanism is opened to the processes of socially responsible participation and the conscious interaction of the culture that lives in each place. Psychosocial and post-occupational studies, new communication media, ways of collecting data and technology that can detect social, economic and environmental patterns of the urban spaces are supporting the discipline and bringing another dimension to the practice.

Urbanism as a discipline has secured its place among the other established built environment professions, addressing interdisciplinary concerns. It is a policy and practice base discipline which, like architecture and urban planning, benefits from an extensive and legitimizing theoretical support. While Urbanism continues to evolve, it can be seen the different approaches that have been a catalyst for its transformation. Evolving from aesthetic, that concern with the distribution of building masses and the space between buildings, it has become primarily concerned with the quality of the public realm, both physical and sociocultural (Carmona et al., 2010). Urbanism is concerned with the structure, process of growth and decay, and the factors — geographic, social, political, and economic—, which have shaped the city (Krieger & Saunders, 2009).

Urbanism as a process was a fruit of a culture to transforms a reality, a place, to make it more habitable which embrace different disciplines at the same time to understand the logic of the territory. What was missing was a synthesis. The professionals able to cover different aspects of the cities already existed, but who could interpret and organized all of them? It is then when the term Urbanism was born. Not to see the city as individual parts but a body. Therefore, it is interpreted that the training of the Urbanist does not separate the parts in specific courses, but relates their parts in developing inter and transdisciplinary projects on social, environmental and economic problems.

The School - Study Plans of Urbanism in different regions

We can define Urbanism as a group of empiric technics which objective is to order the cities, and for extension the territory -this last thing because of the existing distinction between the city and suburbs. This group of technics has a theory support that synthesized the knowledge of a group of disciplines of scientific character

(geography, sociology, economy) or technic-artistic (architecture, civil engineering). More recently, Urbanism has established interrelation with others, like political sciences (as Urbanism is a key instrument in the government of the territory) and ecology (because of taking care of the sustain of environmental quality in the processes and types of urbanization). As a discipline, with a spatial basic component, the practice of Urbanism in some countries, particularly in southern Europe, is related to the practice of Architecture (Ruiz Sánchez, 2002).

The practice of Urbanism has incorporated in its tools aspects of management, every time more complex, that come from the urban planning, where the components of spatial design is just a part. However, the tradition in one hand, with the necessity of maintaining the spatial component in the first plane, and the contrasting capacity of synthesis of knowledge and the proven ability to synthesize knowledge for its inherent implementation of architecture on the other, keep Urbanism as a field of dedication manly to the profession of the architect (Ruiz Sánchez, 2002). Still, Urbanism has an additional level of complication that forces the training of its discipline an approximation in its complexity.

From a sample of sixty schools in Europe study, it became apparent that, of the average total of teaching hours required for the diploma in architecture, Urban Education accounted for 7.6% (Spiridonidis, 2004). This reference ranks Urbanism in the curriculum as fourth in order of importance, after Architectural Design (33%), Building Construction (12%) and Theory- History (8.7%). Is this an appropriate percentage when architecture is the basic material for the construction of the city and the city is the social space in which all architecture is framed? If the construction of urban space is the goal of architecture within the city, therefore, architecture and city are linked. Probably, courses of Urbanism should have a higher percentage or linkage inside the curriculum and have a better complementation in the Architectural education.

The beginning of teaching Urbanism as a degree at the universities started to emerge because of courses offered in Europe and North America. In North America, the discipline of Urbanism began with the first formal North American programs in City and Regional Planning (1923) and Urban Design (1960) at the Harvard University. This last one was born along with the texts on the subject published in that period, including (Figure 3): Lynch's *The Image of the City* (1960), Mumford's *The City in History* (1961), Jacobs' *The Death and Life of Great American Cities* (1961), Cullen's *Townscape* (1961), and Bacon's *Design of Cities* (1967).

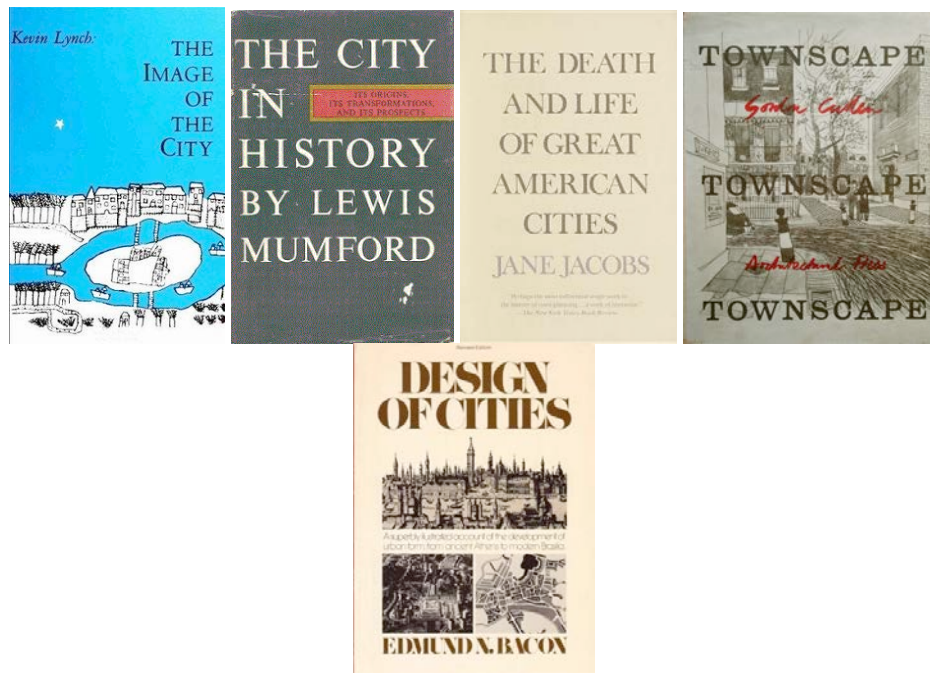


Figure 3: (left to right) Lynch's *The Image of the City* (1960), Mumford's *The City in History* (1961), Jacobs' *The Death and Life of Great American Cities* (1961), Cullen's *Townscape* (1961), and Bacon's *Design of Cities* (1967).

In South America, the studies of Urbanism are related with several events, like in 1944 when the Faculty of Architecture and Urbanism in Chile was created; and with the initiative of the Higher Institute of Urbanism of the University of Buenos Aires in the United Nations (1949) declared on November 8 World Day of Urbanism. In Europe, the crucial dates are when the first academic course on urban planning was offered by the University of Liverpool in 1909; when the Town Planning Institute was established in 1914 with a mandate to advance the study of town-planning and civic design; or when the first International Congress of Modern Architecture (CIAM) produced the Athens Charter started teaching about the urban planning based on the function in 1928; or also when the Department of Urbanism in the Faculty of Architecture at Delft University of Technology was established in 1948.

In the United Kingdom during the first decades of the twentieth century, Urbanism was configured as a profession linked to the physical and technical aspects of design. During World War II, the work of Abercrombie in London and several reports commissioned by the central government created the Town and Country Planning Act of 1947, which enlarged the demand of urbanists and created a new labor market. The government commissioned the Schuster report, which transforms Urbanism from a drawing-based activity into an activity based on the social sciences, primarily geography, economics and sociology. This is part of the origin of the separation between Architecture and Urbanism in British education and training (De Terán & Sánchez de Madariga, 2005).

In France and Germany, with a lesser tradition of the Anglo-Saxon countries, where there have been degrees in Urbanism since the first decades of the last century, specific formations in Urbanism started to develop since the 1960s. Also, with full-time formats during training periods of one to two and a half years. Comparable formations have also developed in Italy, although much smaller and much less

diversified. Exceptionally in the United States and the United Kingdom, there are specific undergraduate degrees in Urbanism, for students without previous university degrees.

Both, in France and in the Anglo-Saxon countries, there is a multiplicity of approaches in all these studies, and a clear differentiation between professional qualifications aimed at the training of researchers. In the Anglo-Saxon countries, the latter masters focused more on research than on vocational training are generally called Urban Studies, different from master's in Planning or in Urban Design; in France, they are the "Diplomes d'Etudes Approfondies", DEA. In both cases, these qualifications can be obtained as an end itself or as an intermediate stage towards the attainment of the doctorate. In the latter case, the usual thing is that the credits obtained during the master or the DEA are considered as doctoral credits.

In Italy, the professions of architecture and engineering are protected by two associations, whose admission is obtained by passing state examinations. Architects and engineers have always demanded exclusive jurisdiction over Urbanism and have refused to accept new graduates in town planning. As a consequence, the paradox arose because urban plans could be "signed" by chemical engineers or by architects specialized in interior design, but not by urban planners who had received 4 or 5 years of specific training on the subject (De Terán & Sánchez de Madariga, 2005). This take away the validity of the profession and the training needed to practice it.

One of the consequences taken for granted is the disappearance of the traditional architect, and bets on a more specialized formation, which shares the idea of architectural project as the starting point of all of them. "The European architecture directive establishes a minimum of four years, assuming that all the professional competences in force are acquired. If its acquisition is modulated - according to the sequence proposed by the EEES - the degree could give rise to a basic architect, with competences in the field of housing; the masters, to specialists with competences in the traditional fields of work of the architect: building, urbanism and design, and the third cycle, to graduates with training in subjects of high specialization" (De Terán & Sánchez de Madariga, 2005).

By studying more in detail different models of Urbanism as a Subject in in Europe, it was studied some characteristics about each country to make a comparison. The information used for this part is taken from bibliography date from 1973 (Solà-Morales Rubió, Gómez Ordóñez, Busquets Grau, & Font Arellano, 1974), 1995 (De las Rivas Sanz, 1995), 2003 (Monedero Isorna, 2002) and 2005 (Hernandez, 2005). From the comparison made it is concluded that United Kingdom for their long tradition worrying about the study of the Town Planning has manage to incorporate new ideas and tendencies in such field making the discipline more validated than in Central or Latin Europe. This has helped also in the integration of the government in recognition, association and subsidies. However, this has led to made Urbanism as a discipline of its own and a separation from the training of architects. In the study plans for English Architecture Schools, Urbanism is integrated in other courses but not as specific courses. This, in contrary to other countries like Holland, Belgium and Italy that have near 10% of their courses dedicated to exclusively to Urbanism. It is also noted that specially in Central-Europe has manage to integrate the discipline to

two main backgrounds, civil engineers and architects, to cover the technical and more scientific area, something that for example in Latin-Europe is not common.

Comparing how Urbanism as a subject has developed and how it is approached in each country, it can be deducted that Urbanism is in constant questioning and the disjunctive between the artistic and creative attitude and the social attitude. Urbanism cannot use the plasticity of architecture nor to develop the paradigmatic causticity of economics, for example. All this, along with the role of universities, that if we consider the training architect gets in Urbanism, the quantity in percentage is low and frequently called into question. Is not to the debate on the future of teaching in the strict sense, but it should be mentioned in this reflection the debate around the requirement of a specialization for the practice, as it affects the conception of the higher technical school as an institution that must scientifically form the professionals with the adequate tools.

Conclusions: Difficulties and Opportunities

After many years of individual, isolated work of architecture, -landscape architecture, road engineering, and city planning, that developed independently-, we are logically coming to an era of synthesis to solve urban design problems, previewing the discipline of an architect- planner- administrator, as one profession to solve the urban situations from small details to its whole. The urbanist as a profession was born with a clear social responsibility that implies harmonizing all the components that affect and are affected by the built environment. There was a need to have a professional that could understand different aspects which affect the urban form, social life, environment and economics. It is then necessary for the urbanist to be trained in these general aspects in accordance with the history, actuality and tendency of the place.

Often, the modification of the political and economic situation is insufficiently reflected in this type of technical conception of applied Urbanism. An option to be contemplated is for Universities to become the place where urban plans are approved or rejected, models such as the ban on city expansion, an idea that is initially considered counterproductive and unrealistic to limit the consumption of surfaces for residential use, for example. Urbanism in Higher Education is an opportunity to invite students to meet, comprehend, integrate and compose knowledge, theories and corroborations related to the city as a cultural, social and economic fact. It is a platform to produce outcomes related to social life in the built environment, to the cultural dimensions of the form and organization of urban space.

The point of studying the teaching of Urbanism in Architecture Schools is because it is considered that the dialogue between buildings makes possible the construction of the territory and the city as a whole, and that necessary dialogue from aesthetics, scales and strategy. This forces the architect to have an urban formation. As it was seen, Schools put more or less weight on this matter, as not all of the students will practice as urbanists in the future and what is needed is a general conception, to later on, if desired, make a specialization. Then, knowing that Schools of Architecture, where Urbanism does not constitute a profession with its own entity, and the architects are the urban planners, mean that the urbanism should not be taught as "urbanism for architects" but, with all its implications. Therefore, the role that corresponds to urbanism in the teaching of architecture cannot be a mere secondary

role, subsidiary of architectural projects. What does seem clear is that all architects must acquire this global vision, since all, whether or not they do postgraduate studies, as in fact they are urban planners.

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