INTERDISCIPLINARITY IN PUBLIC SPACE PARTICIPATIVE PROJECTS: METHODS AND RESULTS IN PRACTICE AND TEACHING[1]

Pedro Brandão, Urban and Regional Systems Research Centre, IST – UTL, Lisbon, Portugal (pbrandao@civil.ist.utl)

Antoni Remesar, Polis Research Centre, Barcelona University – Spain (aremesar@ub.edu)

Ana Júlia Pinto, Polis Research Centre, Barcelona University – Spain (ajulia.pinto@gmail.com)

Ana Luísa Brandão, Polis Research Centre, Barcelona University – Spain (ana.luisa.brandao@gmail.com)

ABSTRACT

Because Urban Design is a territory of integrative synthesis, the "overall view" that it requires comes through the collaboration of various sources of knowledge, some through professional and others through non-professional knowledge of users.

The representation of actors involved in design (be them other professionals, urban deciders or users) is a part of research and teaching culture for several reasons namely because social and cultural interaction in the context of Urban Design management requires several capacities.

CRPOLIS, an research interdisciplinary center on urban studies in Barcelona University is linked to Urban Design teaching at master's degree level and supports an interdisciplinary research program also at PhD level in collaboration with other centers, in Spain and Portugal (such as CESUR-IST) where some cases of real "hands on" processes are developed. The role of interdisciplinarity in collaborative knowledge is relevant in gathering and interacting in three major directions:

1. In the construction of collaborative interdisciplinary research methodologies
2. In the design process of cities in transformation
3. In the development of design practice and studio teaching methods

We shall see in this paper how interdisciplinary approaches correspond to new and complex urban transformations, focusing on the importance of actors' interaction processes, combining professional and non-professional knowledge and theory-practice relations. Therefore, we aim at a deepening in public space area of knowledge under the growing complexity of urban life. We see it as a base for further development of collaborative projects and their implications on community empowerment and urban governance at local level. Motivations of this line of work are persistent in several ongoing research projects, aiming to:

- Understand public space as a cohesion factor both in urban life and urban form

- Manage processes and strategies as elements of urban transformation,

- Stimulate the understanding of actors' roles in urban design practices.

---

[1] This paper was selected for a presentation at the "*Understanding Interdisciplinarity: Theory and Practice - An International Conference*". University Sheffield Hallam (UK), 12th-14th June 2012. As the conference proceedings never were published we edit this revised version of the paper

- Favoring the questioning of emerging aspects of urban space production…

The paper presents and analyses processes, methods and results from civic participation projects developed in the neighbourhood of Barò de Viver (Barcelona) and in the District of Marvila (Lisbon).

In the first case, a long process initiated in 2004 and partially completed in 2011, neighbours developed the projects "Memory Wall" and Ciutat d'Asuncion Promenade as part of identity construction in public space, in collaboration with a team of facilitators from CrPolis group.

In the second case, different participatory processes dated from 2001 and 2003 have resulted in the implementation of a specific identity urban brand and communication system with an ongoing project of "maps" construction according to the neighbours perception and representation systems.

We may conclude that processes of urban governance require more active participation of citizens in projects regarding the improvement of quality of life. At the same time, the implementation of these processes requires a clear interdisciplinary approach, both with respect to the negotiation processes and the development of public space as an "urban structuring product" that we can axiomatically define by its multidimensional structure and its interaction with urban social life.

In all these projects neighbors have a prominent role, which in theory and method offers a serious reflection on how to develop participatory processes on public space with actors interaction at the same level, with local governments, experts and politicians, involving non-professional knowledge in collaborative environment

Keywords
interdisciplinary, urban design, participation, urban cohesion

"(...) Interdisciplinarity is a way to solve problems and answer questions that cannot be addressed and answered by using a single method or approach (Klein 90)."

The representation of actors involved in design (be them other professionals, urban deciders or users) is a part of research and teaching culture. The motivation for this line of work is to foster the understanding of the contribution of collaborative and reflexive processes and also of actors roles in urban design practices as elements of urban transformation processes.

Because Urban Design is a territory of integrative synthesis, the "overall view" that it requires doesn't come from a "big holistic synthesizer" but through the collaboration of a diversity of overall views from various sources of knowledge, some being professional and others non-professional knowledge. It can be said that the integration process of urban design geared by interaction with users in problem solving, represents a major attempt to establish a common ground, making use of inputs from different disciplinary backgrounds.

Interdisciplinary oriented Urban Design practice requires reflexivity. In this paper we try to show how interdisciplinary approach corresponds to needs determined by complex and unstable urban transformations, the limitations of disciplinary knowledge and the gathering of collaborative knowledge interacting in three major directions:

1. The role of interdisciplinarity in design process for urban transformations.

2. The construction of collaborative interdisciplinary research methodologies :

   2.1.-Collaboration and participation in public space projects.

   2.2.-Interaction with users in design process and studio teaching methods.

3. Concluding and open questions.

We shall focus on the importance of actors' interaction processes, combining professional and non-professional knowledge and theory-practice relations. A deepening in public space line of work has implications with urban governance at local level with community empowerment in collaborative projects. These motivations persist in ongoing research projects, that aim:

- To understand public space as a cohesion factor both in urban life and urban form

- To manage processes and strategies as elements of urban transformation,

- To stimulate the understanding of actors' roles in urban design practices.

- To favour the questioning of emerging aspects of urban space production…

THE ROLE OF INTERDISCIPLINARITY IN URBAN TRANSFORMATION DESIGN PROCESS

Urban Design on one hand, as an operational part of Urbanism is between the analytical field of sciences like History, Geography or Humanities, that underpin Urban Planning, and the professional knowledge concerning design: the "materiality" and "spatial meaning" of a constructed place. But interdisciplinarity in Urban Design is not just a natural operative quality due to diversity of required knowledge.

In what concerns scale, urban design is traditionally said to correspond to a scale of proximity if compared to planning scales and to a territorial scale of context, if related to architecture. However it happens that scale is also a phenomenological indication when we refer to urbanity as a complex dimension. That means that Urban Design relates to induction as well as deduction -"to be a discipline, design needs not to be a science" (Brandão 07)

In the "archeology" evolution from "positivity's" as Foucault calls, "operational disciplines" use pre-scientific knowledge together with some elements of scientific disciplines, in a way similar to what happened with medicine from the 19th century on. This base ensures reasonable consistency with a speech about what is or is not right, at the same time as we acknowledge uncertainty.

Knowledge of public space and Urban Design exists in practices based on different experiences of observing and explaining its subject, the City, or of defining more or less temporary changes and also in specific ways that we can summarize with the idea of an interactive vocation:

- "Knowledge borrowing" allows design professions to fill a shortage of content, and depletions of theoretical foundation, supporting creativity, with rationality.

- "Grouping beliefs" allows design professions to create a construct of values, asserting themselves as interpreters of "visions", paradigmatic announcers "of future".

When we say that urban design has a mission referring to Public Space, what do we mean by "Public"? A "public" end is the final entity of an urban project when there's a service that is expected from public space, infra-structure, landscape, public facilities and even housing. The "Public" can then be seen either as the subject of a "performance" that we set, or as the "user" that lives public space, or as a "citizen" being part of its government. To explain the moral specific sense of what's meant by "public" when we refer "public good", "public interest", "public sphere", we widen the concept of public space not only including public spaces (streets, squares, gardens ...) but all spaces of social interaction (Habermas 94). If as says Wittgenstein "meaning is in the use", public space design takes place only when the "Other" is central in design process. Interdisciplinary and participation are a form of "otherness".

Urban transformation as a matter of knowledge has a single object, the City and the production of urban space, but its multifaceted approaches allow multiple approaches from scientific fields and design cultures. Theoretical formulations about the city come from two main knowledge sources: the Social Sciences -Economics, Environmental Studies, Geography, History, Sociology -structuring knowledge

retrospectively from the "city that exists," or "has existed", and also the design culture, based on constructs of ideas and paradigms on the city of tomorrow, with several cultures with their own technical sophistication and sense of mission:

- Architectural culture in European intellectual tradition -classicism, the canonical field translated into a public building, and Idealism, the references of new modern world.

- Landscape Architecture, from Gardening to Urbanism, based on intellectual naturalism - the desire to be close to nature, and ecology -how it works and what is its meaning.

- Industrial Design, a practice with several convictions: From empirical Arts and Crafts know-how, to Functionalisms' utopia of a world of new products to improve daily life.

- Visual Arts vanguards seeking to interpret the "spirit of time": Romanticism, emphasize imagination and free individual vision, and realism seeking directions in day to day life.

- Engineering, infra-structuring primacy, supported by technical ideology -a rational determination of development of cities.

How can we harmonize all these convictions, seeking to serve a common good? Theoretical approaches to interdisciplinarity in urban design, not just respond to classic cooperation between arts, nor to the coordination of technical specialties (such as in building design). Teamwork, by adding-up different contributions, implies the need for compatibility, but to somehow operate the sense of interdisciplinarity we must consider conflict.

The matrix in interdisciplinary process of urban design is not merely instrumental, but structural: qualitative problems of urban territories have characteristics of an increasing ambiguity and conflict. The City finally "socialized" itself with the "consciousness of an irreducible difference in nature, between aesthetic perception and city perception" (Choay.. 65). On another level that touches urban questions criticism on everyday life, for people as Barthes (Fashion), McLuhan (Media), Lefebvre (City), Braudel (Material life) interdisciplinary work arises from frustration with traditional disciplines in their refusal to embrace a collaborative territory: "Taken in their technicality and specialization, knowledge activities have a greater gap between them that is filled by everyday life. Everyday life is profoundly related to all activities, with all their differences and conflicts and it's their meeting point, their unity, their common ground"(Lefebvre 74).

We recognize that interdisciplinary activities pursue the "overview", an "holistic" synthesis, by putting a critical pressure on traditional disciplines (even those that see themselves as generalist synthesizers), with new goals that urban transformations always require (Klein 90):

- To answer to complex questions, with many factors and constraints

- Addressing conceptual issues whose vastness is beyond classic divisions

- To explore extra-disciplinary or non-professional views and visions

- Solving problems that are beyond the scope of a single approach

- Achieving unity of knowledge in a different scale of starting point

Limitations and difficulties in urban design interdisciplinary relationship

Interdisciplinary limitations in Urban design arrive from project complexity, management sophistication, different actors and processes backgrounds and moments of interaction.

Difficulties in interdisciplinary practices of urban design are unavoidable in urban life cycle and cannot be eliminated, since method is made of awareness and efforts to overcome problems:

- Distortion of "borrowed material", the use of data, methods, concepts out of context

- The illusion of "certainty" or over-confidence in a new perspective

- Trend for non-adversarial questioning and group dynamics on team work

How to find a solution for these difficulties is a line of work that requires reflectivity, expertize in communication and negotiation tools "… because disciplinary compartments are not generating enough reflectivity, when one has to consider both program and process and manage both communication and negotiation techniques in a new trading system of roles in design process" (Spector 70).

More specifically, limitations are about priorities in interdisciplinary research. We can find in some questions of research, subjects of unavoidable interdisciplinarity where we need to focus on actors agreements, knowing that further need to answer new problems will arrive next:

- Flexibility + duration + urban adaptability

- Identity + character + branding operative scales

- Urban systems + systematic approaches to space

- Urban transformation + growth and decline

- Strategies + participation + place making methodologies

- Actors + their roles + moments in interaction process

- Long term + short term consideration on opportunity and permanence

Therefore, interdisciplinary collaborative and reflexive process, "rather than an "established" formula, gives new answers to new problems and new urban contexts, based on actors agreements" (Remesar 90).

THE CONSTRUCTION OF COLLABORATIVE INTERDISCIPLINARY RESEARCH

Professions appear as beneficiaries of the division of knowledge and as "administrators" of an operational discipline. Although the need for technical collaboration is consensual in Urban design it's often a subject of dispute between design professions. But as this process is evolutional by operating in a changing environment, urban design practice and knowledge also have to change: we can't speak about interdiscilinarity without speaking about disciplines' practice and its' crisis. This is the source of conflict in the field of Urban Design.

"Professional loneliness" comes from self-centered professional perspectives, and from the fact we have not yet put in charge of our social statement a proactive perspective of collaboration between professionals and non-professionals. Still we define design in a broad manner as "form giving", a subject that previews, defines, or provides the form of the city through Public Space, and we have to admit for that a professional and a non-professional practice (Juez 02):

• Non-professional are able to reproduce already known solutions, responding with efficiency and practical meaning to common problems, allowing to judge the result.

• Professionals are characterized by the ability to identify a somehow "undetermined" problem and choose one from among an infinite number of possible hypotheses. If so, it's indispensable to develop a methodology for experience feedback.

How to promote collaboration between professional and non-professional practice is the main question in the process of collaborative research. This implies a range of possibilities, where some main interdisciplinary topics connect to citizen participation in process and procedures involved in action, from Programming and Planning to Design.

CR-Polis[2] research group is an interdisciplinary research centre within Barcelona University since July 1999i, with associate partners and cooperation projects with research groups and Universities in other countries such as, in Portugal IST-CESUR, in a network platform. Team work includes an heterogeneous group of social scientists, art critics, urban design specialists and social psychologists contributing to the debate on problems of contemporary cities by promoting innovative analytical approaches and more specifically, at:

• providing information tools for better understanding the social processes that undergo the construction of public space;

• analyzing opportunities linked to the development of active processes of citizen participation with special reference to the issue of urban governance;

---

[2] CR-Polis operates through research projects, organization of scientific events and publications, an international Observatory in Public Art and Urban Design (PAUDO) as well as training and education initiatives for Ph.D. and Master students, collaborating with leading researchers working in and outside Europe. This structure is reflected in academic curricula. Master's core academic activity is focused on urban project design studio, by bringing together different theoretical disciplines

- generating, especially through international cooperation, a confrontation between ideal models, and real practices.

An important aspect of Project Design studios is that it works in "real project proposals" derived from research work, in collaboration with public institutions in a "think tank" for proposed solutions in participatory public space projects.

Collaboration and participation in public space projects.

It can be said from our experience that the integration process of urban design geared by interaction with users in urban problems' solving, represents a major attempt. Interdisciplinary oriented Urban Design practice is not in itself a producer of knowledge. But it requires reflexivity and therefore uses a research methodology to establish the common ground.

This paper presents two participative processes, both of them peripheral, in the context of social housing program quarters, in Lisbon and Barcelona, that were subject to social criticism and stigma motivating the intervention processes. We analyze processes, methods and results:

• In the first case, developed in the neighborhood of Baró de Vivir (Barcelona) neighbors in a long process initiated in 2004 and partially completed in 2011, developed the project "Memory Wall" and the Ciutat d'Asuncion Promenade, aiming at empowering through identity and collective memory research.

Strategies were based on Public space proposals, in order to improve neighbourhood internal and external image by good quality public spaces.

The collective memory of the community but at the same time the will to surpass discrimination and isolation led to a strong participation project very much supported by youth association and by older residents gathered around neighbors' association.

Developed since 2002 in cooperation with the city Council and CRPolis research center, the project has 2 completed units (in 2011), the "Memory wall" gathering images and facts brought by neighbors, and the Rambla project, with a symbolic art piece at its final – the "cheap house".

Metholodgies for the upgrading includes "CPBoxes" diagnosis, participative models, and a a long process along different stages:

Workshops with a group of citizens > A question/theme is raised.

The question is answered by all > Collecting: Photos, drawings, press clippings,….

People's agreement upon the answer> Together they adopt patterns of comments.

Comments, patterns and notes of facilitators> the research group draws a report.

Opening new questions and working lines> a first approach to be publically exposed.

• In the second case, in the District of Marvila (Lisbon), a social housing development with

50.000 inhabitants from the 70-80's, different participatory processes dated from 2001 and 2003 have resulted in the implementation of a specific identity urban brand and communication system with ongoing components produced according to neighbors representations and choices.

Here Urban design's Software, as a public space design dimension, includes that part of design domains that have to deal with human interaction features connected with physical aspects of space. Urban communication is a case and in Marvila, a poor social housing district of Lisbon, the project of a collaborative branding triggered the question of "naming", as a process of escaping stigma and cultivating proudness on belonging and self-esteem.

For more than a decade several actions starting with an ephemeral public art festival "Capital of nothing" organized by post-graduation course students in 2001, the way-finding project of "Inhabited City Signs" in 2002 and the Maps undergoing project, where characteristics like fun, ease collaboration, involving children, democratic decisions and other assets have been decisive. A Prospective identity (what we want to be) is being constructed:

Place making:

- A brand of "friendly people" and Somewhere worth going

- Re-enforcing natural references (trees, river, colours)

- Brand common values: "well-being" Re-naming

- Refusal of parish stigmatic name

- Refusal of letters and numbers Logo voting

- Refusal of previous image -The CLOVER (the lucky four leaves) is the choice

- Diversity of quarters -"bairros" expressed in Maps and "doors"

We can take the general picture of both cases by saying that differences in integration (multidisciplinary, interdisciplinary, transdisciplinary), are more than about the degree of collaboration. Urban design process begins with a problem that in some part may be determined by a participation process with users and other actors. Process and procedures involved in action, from Programming, Planning and Design show in both cases the importance of an idea of timing, that allows adaptation of process and flexibility in procedures.

Another common notion is that "Publicness" is a strong defining character of urban space that gets more obvious by crossing or linking systems (such as Landscaping, infrastructure, facilities, communication…) in public space problems solving.

Finally, hardware and software as tools for action have different but connected roles in Urban Design, meaning that the physical ingredients in planning and design are only possible in a process of urban regeneration when there are intangible relation values between people, breading by a process of interaction.

Interdisciplinarity is a way of solving problems and answering questions that can't be addressed and answered by one discipline alone but require for its solution "overcoming discipline boundaries" (Klein) by working together in the context of a problem or a relevant theme. In this sense we may conclude that flexibility and adaptability are common goals of present urban transformations. If so, there are interdisciplinary actions "that we can't chose not to do":

- To answer complexity – many factors and constraints

- To include – new visions with non-professional inputs

- To solve problems – requiring diverse inputs

- To "make of the city"-place-making strategies

- To empower – ability of a population to take on > process and procedure

- To facilitate – tools for "operational proposals" based on common values

- To enable -better adaptation of design to realities in which it operates

- To negotiate -actors and public systems (landscape, infra-structure, urban facilities)

Knowledge interaction in design practice and studio teaching methods

"…*teaching of design tends to reproduce an isolated culture of professional practice and a model based on compliance with a self-centered standard image* (J.Till 2005).

The two cases showed involve relation to design studio teaching but in that sense they are

quite exceptional if we compare them to normal procedures and teaching focus, namely:

• on the understanding of actors roles in interaction process

• on the understanding of public space as a cohesion factor

• on the managing of urban change strategies and tools

• on critical questioning of emerging aspects of space production

Diagnosis, strategy, program, concept, simulation, representation, production, are moments of an Urban Design process that we always identify as simplifying attempts to normalize a creative process. In fact, if there is a current urban design method, it is of a special and fallible nature, based on an excluding option (either/or) between paradigmatic thoughts and direct reference models:

- The technical paradigms of design often corresponds to the isolation of production process directly related to typified needs

- The artistic paradigm, in turn, often corresponds to the isolation of representation process and to consider its relation to desire, as independent from need or any other.

In this somehow mechanical procedure between "theory" and "practice", the question "how to teach urban design" is just as complex as the question "how to teach drawing". To find a way out of the dilemma it must be stressed that cities themselves correspond to a joint thematic knowledge. Urban design and many concepts it depends on, are of interdisciplinary nature. And also because we can't ignore it, the method in itself must be collaborative.

With growing complexity, lack of consensus and uncertainty in urban design, we must evaluate teaching methods and "attitudes", in urban design studios. Now discussion is about the kind of knowledge that is needed today… and we must replace self-sufficient design knowledge views by bridge building with other views.

The artistic training foundations of a design professional, often lead to claims for a preliminary social image, the status of designers' authorship as paternal creators. But in the second half of the twentieth century there is a valued role of a new actor, hitherto absent: the user / consumer / citizen (even if represented by state, municipalities or other public protection institutions) that has to play a part in the integration process of non-professional knowledge.

Even if we reduce Interdisciplinarity in urban design to an operating compatibility mode, it offers different interaction possibilities. But if instead interdisciplinarirty is understood as knowledge of a new kind, related to the need for actors participation, then we need a methodology for joint action between Architecture, Art, Landscape and other design students. As a initial working hypothesis the method to be tested in experimental joint exercises could follow a structure with three interaction levels:

1st: Question formulation	To define the problem (issue, topic, subject);
This level of work should be focused on understanding concepts and skills to be used. For example, the concept of "space" is relevant to all knowledge's of the City,	• Need for background -models, traditions, relevant disciplines literature; • To develop a framework for integrative work and issues to be investigated.
2nd Resolution process	Specific special studies to be developed;
By articulating actors expectations or by experiencing "tools" and "modes of action", students can be challenged on their conclusions combining inputs from more than one discipline:	• "Negotiation roles" in teamwork and resolving discipline language conflicts; • Add all knowledge gathered, seek new information, build / sustain communication

3rd. Reflexive interaction

Interaction must allow external actors in the process of learning, to give inputs but also to become readers and critics of work in Urban Design studio:

Contributions for cross-evaluation of appropriateness, relevance and adaptability;

- Integrating parts in one piece and determine the standard of mutual relations

- Confirm or deny proposed solution; decide on future management of task / project.

As part of a research project on Urban Design teaching, University of Barcelona CRPolis and CESUR-IST (Lisbon), conducted a joint study to understand and evaluate how to improve education and training of professionals capable to integrate interdisciplinary teams, develop urban projects, understand processes and relevant actors. The survey had two elements:

a) "Interdisciplinary Study", on the perception of interdisciplinary concepts in participants in education and profession action, aiming at:

- Reflecting and assessing the meaning that different professionals groups attached to the concept of interdisciplinarity, and if it is or not active in practice.

- Reflecting about the concept of interdisciplinary introduction in education, so as to stimulate its understanding and managing in the practice of professional teams.

- Assess limitations and how cultural differences, namely in background, experience and nationality, may influence the understanding and practice of interdisciplinarity.

Results analysis allows us to outline some trends:

- There is a positive sensitivity of students, teachers and professionals, regarding interdisciplinary.

- Interdisciplinarity is looked at from a previous experience and background, that is, from one's receptivity to real collaborative practice and previous culture as decisive.

- The main pointed aspect of an improvement of the interdisciplinarity in education is the matching / linking between different disciplines, and between theory and practice.

b) On the study of teaching methods in Urban Design, focused on actors and questions such as:

- How users are present or represented in design exercises?

- How is the study of social context of urban development structured?

- How are needs for theory-practice sources experienced and communicated?

Results allow us to conclude:

- Main reflective elements are morphological features or site. No evidence of data research beyond iconographic elements of the site.

- Process doesn't reflect degrees of uncertainty relating to programmatic options or economic factors or other. Exercise program is seen as the only basis for work.

- Aspects like assessments of direct or indirect users interests or opinions, and references to post-use feed-back from comparable projects, are basically kept out.

TEN CONCLUDING AND OPEN QUESTIONS

We must stimulate openness to non-prejudiced notions of disciplines legitimacy in urban design. It can be said that integration process of urban design geared by interaction with users in problem solving, represents a major attempt to establish a common ground, making use of inputs from different backgrounds. Different notions and themes about urban space production (its design), in many cases seek explanations through transversal approaches such as mobility, landscape, urban form... but each of those contains in itself some disciplinary matter to root autonomous city shape explanations. The City is a matter for more than one discipline but none of them is diminished in collaboration (Brandão 2006).

We arrive to a strong conviction by saying that interdisciplinary inputs can only be assessed through an ongoing exercise of reflection and experience feedback. The proposal of a teaching context in which design is central to the knowledge of urban space construction, appeals to integrative synthesis in action, through collaboration of several sources of knowledge: some of them analytical/theoretical, others projective/technical, and others practical knowledge of "City life", which can only relate with each other in an interactive and interdisciplinary matrix.

We may also conclude that processes of urban governance require more active participation of citizens in projects regarding the improvement of wellbeing. At the same time, the implementation of these processes requires a clear interdisciplinary approach, both with respect to the negotiation on public space as an "urban structuring product" that we can axiomatically define by its multidimensional structure and its interaction with urban social life.

Interdisciplinary and participation practice require a reflexive answer to remaining questions:

1. How do we represent interdisciplinary work and how are urban actors' knowledge represented in the praxis of urban design?

2. How does the concept of interdisciplinarity meet the idea of participation and how as an answer to the need of knowledge restructuring?

3. How do we represent the contexts and roles of actors involved in project judgments and decisions?

4. The notion that project decisions affect all urban actors should be taken as raw material of urban design decisions?

5. How do we establish the collaborative method and pedagogy, its training and its evaluation?

6. Because evaluation of intangibles is subjective, and values of "otherness" cannot be entirely defined how may we exercise integration of participants' perspectives?

7. How is the diversity of knowledge interaction to operate in urban diagnosis, strategies, tactics and final physical action?

8. How can we stimulate the understanding that knowledge is one, and it's knowledge separation that is artificial?

9. Isn't it a task of collaborative know-how, to learn to discuss the "problem" and accordingly redesign the "program"?

10. Although teaching is not to be confused with practice, how may we cultivate skills and ethics in urban design negotiation and evaluation during training process?

REFERENCES

Brandão, P. A Cidade Entre Desenhos – Profissões do Desenho, Ética e Interdisciplinaridade, Livros Horizonte, Lisboa 2006

CR POLIS http://www.ub.edu/escult

CR POLIS Baró de Viver Case Study . http://www.ub.edu/escult/participacio/index_baro.html

Choay, F. LÚrbanisme, utopies et realités – une anthologie, Seuil, Paris 1965

Habermas, J. L'Espace Publique -Archeologie de la Publicité comme dimension constitutive de la societé bourgeoise. Payot, Paris 1997

Juez, F.M. Contribuciones para una Antropologia del Diseño, Editorial Gedisa, Barcelona 2002

Klein, J.T. Interdisciplinarity – History, Theory and Practice. Wayne State University Press, Detroit 1990

Krieger, A. and Sunders W.S. (eds) Urban Design. University of Minnesota Press, Minneapolis, London 2009

Lefebvre, H. La Production de l'Espace. Anthropos, Paris 1974

PAUDO   (Public   Art   and   Urban   Design   Observatory)   http://www.ub.edu/escult/pauso/index.html

Remesar, A. A Arte contra el pueblo. Tensiones entre la Democracia, el diseño urbano y el arte publico. Monografias, Barcelona 2006

Spector, T. The Ethical Architect – the Dilemma of Contemporary Practice. Princeton Architectural Press, New York 2001

Till, J. The Lost Judgement. in E. Harder (ed) EAAE prize 2003-2005: Writings in Architectural Education. Copenhagen, EAEE, pp. 164-181, 2005