A MODEL FOR UNDERGRADUATE STUDY IN URBAN DESIGN [1]

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Through this paper we intend to raise some fundamental questions regading urban design education at the undergraduate level, and to discuss possible pedagogical strategies. The discussion is fostered by the brief description of a recently developed and still evolving proposal to provide an area of concentration in urban design education at the undergraduate level within the College of Architecture and Environmental Design at the California Polytechnic University, San Luis Obispo, California.

One of the starting points for our Cal Poly program development team – composed of faculty from the departments of Architecture, Landscape Architecture and City and Regional Planning – was to explore the ideal nature of an urban design education, to examine established urban design programs in the US to examine their theoretical and pedagogical underpinnings, and to some extent discuss and advance to a shared general definition of urban design.

By facilitating this debate we will be obtaining specific critique and feedback regarding our program proposal, and will be contributing to the advance of urban design education in general. Awkwardly enough, while there seems to be an agreement on the growing importance of urban design to cities and daily life, we still have to reach for a common definition, a common body of theories, knowledge, and methods, and a common set of expectations.

The Cal Poly San Luis Obispo Initiative

The Urban Design Concentration is a college wide interdisciplinary initiative started through a collaborative effort by the City and Regional Planning, Landscape Architecture and Architecture departments. This initiative supports the notion that UD practice and education is most effectively positioned as a collaborative

[1] The authors wish to thank the contribution of students and faculty at CAED/Cap Poly for their insights in various discussions about this project, among them professors Allan Cooper, Bill Siembieda, Dale Sutliff, Sharad Atre, Zeljka Howard, and Walt Tryon.

effort between the three primary areas of physical planning and design, but also embraces the collaboration of other disciplines/departments including business, sociology, engineering, agriculture, and others. The model is in accordance with Cal Poly's "learn by doing" philosophy and experiences with developing outreach opportunities, by enabling an integrative process within the community context. This involves students working in a collaborative manner, drawing on their areas of expertise and contributing to a more complex and realistic understanding for analysis and design process.

The foundation for the development of the urban design concentration within Cal Poly's College of Architecture and Environmental Design can be attributed to both formal and informal circumstances and supports. The College itself offers professional education within 5 disciplines; Architecture, Landscape Architecture, Community and Regional Planning, Architectural Engineering and Construction Management. To some extent, there has always been a level of interdisciplinary collaboration within the college, the extent of which has varied over the years as it does in any dynamic institution. Formal goals and mandates as articulated in the College's recently developed strategic plan very clearly call for further interdisciplinary collaboration within the College and beyond, and the UD proposal may be seen as a direct response.

There had been collaborative efforts between these departments before, although none which included all three. Most common have been seminar courses offered for students from all departments of the College, and collaborative studios between any two departments. In the fall 2002, for instance, a collaborative urban design studio is bringing together faculty from these two departments, and students from the third (BCRP) and forth years (BLA). Although these studios have always happened sporadically over the years resulting from the individual efforts of instructors – with departmental and college support following – the quality of the pedagogical products and the level of student engagement have always suggested the potential of a more formal interdepartmental commitment.

Two very significant catalysts contributed to the overall energy and momentum of this initiative. On one side, a group of faculty from different departments who have been involved in urban design from different perspectives, and who shared the same vision of an interdisciplinary education. On the other side, a significant number of students from the three departments have continuously expressed desire, support and enthusiasm for collaborative interdepartmental opportunites. The students envisaged that as practicing professionals they would find themselves working in a collaborative interdisciplinary context and within increasingly urban contexts.

Cal Poly's Strategy

The Urban Design Concentration will be a college wide interdisciplinary initiative devoted to service, teaching and research in the pursuit of the practice of urban design. It will be offered to students majoring in

the departments of City and Regional Planning, Landscape Architecture and Architecture, but it is envisioned that the curriculum will also embrace important support courses from other colleges and departments as business, sociology and engineering. As majors in their respective disciplines they learn to integrate their knowledge with that of other professions thus reflecting the true nature of urban design.

Fundamentally, students from any one of the three departments opting for the UD concentration would be required to take (refer to Figure 1):

- a certain number of existing courses in the other two departments;
- at least one collaborative studio;
- a seminar running parallel to the senior project/thesis.

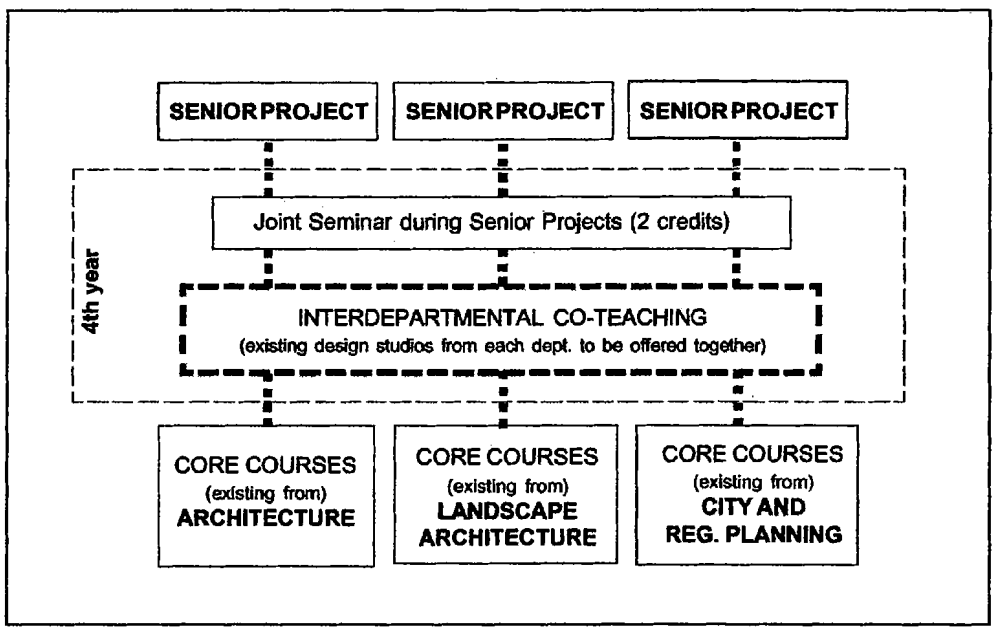

Fig. 1

While this vision and strategy reflect the college's existing potential, it is also critical in these times of limited resources that all courses are active in the college's catalogue. This set of requirements amounts to the carefully optimized choices of professional and general elective courses with faculty advising, yet a wide variety of preparatory "paths" is possible from the students preferences. Although some thse course should have one of their sections devoted to the urban design cause – as the studios for instance – the only proposed new course is the seminar parallel to the development of the senior thesis devised to help students towards the completion of their majors from an urban design perspective. And as this seminar is to be conducted by multiple UD faculty from the three departments within their existing teaching loads, no significant new resource allocation is anticipated from the departments or the college.

In recent years, the college has been offering a similar option in Sustainable Environments to students campus wide, which has proved very popular and successful in terms of creating an interdisciplinary community of faculty and students who feel challenged and empowered to cultivate integrative thinking.

We also recognize the importance of providing students with real life situations that may allow them experience the multifacited nature of urban design. Projects chosen for the studios should have a solid service learning component bringing students and faculty together with local, state and national government agencies, citizens, and community organizations. While this approach allows the students to exercise their knowledge while creating real and practical solutions it is also totally consistent with the "learn by doing" Cal Poly imperative.

This approach for the urban design studio is facilitated by the college and Cal Poly's history of productive relationships with various governmental and non-governmental local, state, and national organizations. All three departments have a long tradition in responding for local agencies and community groups not only through special summer and consultancy projects, but also by having the studios programs adapted to respond to project demands in keeping with their original learning objectives.[2] This tradition is particularly dear to local communities, state and city authorities in the San Luis Obispo region, and many of the past initiatives have resulted in national and local student awards. Present possibilities include, for instance, partnerships with the Bank of America and the Wells Fargo Bank, and special international workshops with the University of Puebla in Mexico.

Through partnerships and community outreach, the UD concentration initiative will foster community participation and will allow "clients" to approach us with their needs in a relationship that is mutually beneficial and critical to the realistic study of urban design. On the other hand, partnerships allow for a flux of external resources that are important for professional standards in studio development.

Although the solution seems an obvious one given that there is strong interest expressed within both academia and the student body, and a clear demand expressed within the marketplace, the structural framework of the university administration may present significant challenges to achieving this collaboration, particularly due to:

- need for continuity in faculty dedication;
- need to formalize continuous community outreach efforts;
- lack of studio space to accommodate confortably students from all three departments;
- need for common spaces to facilitate interdepartmental engagements;

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[2] See some of these initiatives www.caed.calpoly.edu/arch.html

- the difference in length in the majors involved (architecture and landscape architecture are 5 year degrees, while planning is a four year);
- the differences between the models adopted for the senior thesis/project;
- amount of general education units as required by the CSU system.

Toward a Definition of Urban Design

Evidently, the definition of "urban design" would be an impossible and even undesirable task for this discussion paper. Various publications try to do so, and many share the same understandings. It would also be exaustive to list all of them here, and we refer to the existing literature and to the efforts of organizations such as the Institute of Urban Design (US) and RUDI (Resource for Urban Design Information, GK).

A handful of seminal books have paved the way from the early efforts of the sixties to the late eighties (such as Alexander, Bacon, Barnett, Gosling & Maitland, Lynch, Rapoport, Rossi, Shirvani, Spreiregen, Trancik, and Wolfe & Shinn). In 1981, the first conference of US educators in urban design was held but unfortunately limited to a small group who discussed definitions, common practices and methods (Farebee, 1981. More recently, these titles have been joined by important contributions such as Broadbent, Inam, Lang, and Moughtin's series. several papers were crucial in advancing the debate such as those by Appleyard & Jacobs, Vernez Moudon, Kreditor, and more recently by Inam.

Efforts in this direction are also present in other non-English speaking countries such as in Spain, with the now classic achievements in Barcelona, and in Brazil where a series of four bi-annual national conferences on urban design was started by the University of Brasilia in 1985, and the first book fully devoted to the urban design process was published in 1990 (del Rio).[3]

However, although the existing literature argues successfully for the importance of urban design, it also exposes the theoretical underpinnings of it's nature making that the picture of what urban design is and what the education of an urban designer should encompass even less definitive.). In an early and mostly overlooked but important effort, Wolfe & Shinn (1970) develop the process-oriented nature of urban design and define it as an "inherent design element" in the planning process having the whole community as client, and oriented to a three-dimensional product that is meaningful in the realm of usfullness, efficiency, safety, and pleaseantness.

Lynch (1984), understood that urban design (which he calls city design) "should include a high level of public participation with the intention of making cities collective and intentional works of art". Bacon, on

[3] It must be noted that in Spanish and Portuguese speaking countries the words "diseno" and "desenho" mean both "drawing" and "design", and that their schools of architecture have always been much more culturally bound to "urbanismo" – both a profession and a discipline with deep roots in European physical planning.

the other hand, took a different approach in proposing that "the design of cities in the future should be conducted by a holistic profession which should be derived from a merging of the boundaries between architecture, landscape architecture, planning and urban design" (1988: 329). Vernez Moudon (1992) defines it as a "professional, perspective field drawn from a variety disciplines, and an inter-disciplinary approach to designing the built-environment through the integration of the planning, design and recently, landscape architecture professions". Lang, in his important work on urban design in the US observes that it is "a relatively new term for an activity long standing...concerned with the design of the four-dimensional physical layout of human settlements and their parts" (Lang 1994: ix). He advances the discussion by treating urban design as both an integrative discipline and profession, toward a synthetic vision, and for the sake of the non-paying client. And recently, Inam (2002) raised an important phylosophical discussion in arguing that urban design needs to be teleological, catalytic and relevant.

In some of our own work we defined urban design as fundamentally a process-oriented as opposed to a project-oriented field of expertise, and that it could be defined as a "multi-disciplinary field that accounts for the physical environmental realm of the city as the assemblage of physical and activity systems interacting with the population through their daily perceptions, actions, and experiences" (del Rio). In that sense, urban design is seen much more as the evolving result of a planning activity (thus a process), than an architectural output (a product).

Of course, we could choose to be quite unconcerned about this and note that the divergence of opinion reinforces the notion that urban design is a messy and complex area which draws on the expertise of several disciplines. The evidence that urban design education and practice is being discussed and debated within a broad context is both meaningful and beneficial.

However, the discussion, makes apparent an important pedagogical distinction: the notion of urban design as the creation of art – an intuitive and object creating act - versus urban design as a procedural and process oriented activity. The distinction itself may not be of concern, but may, in fact, serve to enrich the debate and maintain dynamic and fluid environment open to change and evolution. While these differing foundations are not mutually exclusive of each other, in the formal delivery of urban design education this theoretical divide becomes very apparent in the resulting program objectives and curriculum content.

Our view is that the polarization of these viewpoints within established programs is contrary to the integrative and inclusive nature of urban design and that both viewpoints must be embraced and represented through urban design program delivery and exploration. No single discipline seems to provide the best root from which to spawn cooperation; it is the confluence of the arts and sciences, human and natural, which begins to deal with what is urban design. Each environment will tend to be answered in its own terms while satisfying its fit within an larger context, sustaining itself and the larger system in all scales of place.

What common ground can we find in the definition of urban design to serve us operationally in the development of urban design curriculum? To serve our objective of creating a starting point for the exploration of what an urban design program should be, we were interested in developing not a precise and definitive definition of urban design, but an inclusive and operational definition that could serve as a broader platform for exploration.

Thus we arrived at a working definition that the study and practice of urban design shares the following characteristics:

- it is multi-disciplinary;
- it is of varying scales - concerned with the city as a whole as well as with detailed design interventions within the public realm;
- it's focus is to support man's behavior-environmental interactions – quality of life and environmental fit;
- it is procedural in nature and fully congnizant of natural sustems' limitations and potentials as part of the social, economic, and environmental "landscape".

Urban Design Education in the US

Although Urban Design education in the US has been increasingly regarded as a specific academic and applied discipline for the past several decades, it continues to be delivered through a variety of theoretical and pedagogical foundations. While there are many programs in architecture, planning and landscape architecture that offer an urban design component within their curriculum at both the graduate and undergraduate levels, the vast majority of programs offering formal program certificates and degrees are at the graduate level. These programs are usually associated with, and supported by graduate programs in the allied professions of architecture, planning, and most recently landscape architecture.[4]

It seems that the growth in urban design program offerings is due, for the most part, to the growing recognition that isolated contributions from the allied professions of architecture, planning and landscape architecture are insufficent when it comes to responding to the complex challenge of building and managing the evolution of city form and process. While there is a great deal of variation in the focus of the educational content addressed within each program, most emphasize either urban design process or built form product as it relates to the physical and spatial design of urban environments with consideration of the behavioral implications of the designed outcome. As well, most programs address, to some extent, other aspects of urban development such as social, historic, political, economic, ecological and legal factors. With respect to

[4] Important subsidies for this section were obtained from a research on urban design education in planning and architecture schools in the US carried out in 1992 (del Rio 1992).

defining the discipline of urban design there appears to be a substantial variation among the existing programs.

However, a significant degree of common ground regarding the nature of urban design is apparent by analysing the official literature of these programs, and it includes definitions of urban design as:

- a hybrid of architecture, urban planning, landscape architecture and environmental design as contributing disciplines.
- imagining and carrying out programs to improve the quality of the public realm of cities suggesting the inclusion of both process and form towards physical design intervention.
- coping with, and managing, the social and physical process of community change over time.
- the application of planning principles and theoretical foundations to the design of urban settlement patterns.
- the continuing and deliberate effort to arrange, manage and develop the built environment at an urban, metropolitan and regional scale.

If one examines the curriculae and expected outcomes with respect to student skills as set by a number of UD programs in the US, the degree of leaning toward physical and spatial design versus land use policy appears to be dependent on which professional program it is associated with as opposed to its overt philosophical underpinnings. Those urban design programs associated with architecture, not surprisingly, tend to be more strongly oriented towards physical design with an emphasis on built form, while those associated with planning programs are more likely to be policy oriented in addressing settlement development, with a greater focus on process as the vehicle for intervention.

While it could be argued that a similar degree of variation in established urban design programs may be found in programs sharing the same professional discipline as the foundation, from our perspective, it reinforced the value of providing urban design education at an earlier point in the education of the allied disciplines. This would serve to both establish a common base of collaborative experience early on in the students education thereby reducing the likelihood of the development of professional bias and alliance towards the discipline of origin. To achieve this goal, there is a need to create a common educational experiences based on the support of, and collaboration with, the allied professions at an early stage in the students academic career, if not some common theoretical and procedural ground.

The Urban Design Agenda: Toward a Shared Vision in Undergraduate Education

We support the notion of UD practice and education most effectively positioned as a collaborative effort between the three primary areas of physical planning and design - architecture, landscape architecture and

planning. It is imperative that these three disciplines bring their areas of expertise to the table and as such, it requires that opportunities for collaboration occur primarily at the undergraduate level.

From this piece by piece collaboration with others of similar passion, a positive environment develops between the faculty collaborators and between the students, and is perceived by others attracting new opportunities, resources, and change. The demand begins to sustain not only the growth but also the better nature and larger impact of the organism; its care and development becomes the challenge of new students and faculty attracted by the opportunity. This has been the experience with the above mentioned Sustainable Environments course at Cal Poly that became a series, a community, a minor, and now a model for bringing about educational adaptatios across interdisciplinary lines.

In this respect, although it is important to consider urban design as something more that a simple amalgam of these three design disciplines, it is fundamental that we must consider it from complementary perspectives when putting together a pedagogical strategy. Most essential is the modeling of desired practices including methods and strategies to structure collaboration in meaningful and effective ways. Thus urban design could be considered from complementary pragmatic pespectives: from the planning perspective (development scenarios and processes, view corridors, setbacks, building bulks and heights, and street amenities), from the landscape architecture perspective (streetscape, planting, public and spaces between the buildings, and signage), and from the architecture perspective (building character, typologies, style, materials, signage, and street amenities such as canopies and arcades).

Also critical to realistic modeling is the utilization of community based contexts to provide physical, social, political, economic and administrative realities to the process of urban design. Outreach opportunities seem to be the best for programs to enable the integrated process of urban design and development to occur within a community context, having the students to work in a collaborative manner, drawing on their areas of expertise, and contributing to the whole.

Although most urban design programs are in the graduate level, we believe it is critical that undergraduates be offered a higher plane of critical thinking and that it could be established earlier based in a more holistic/comprehensive/ integrated paradigm of interdisciplinary-sutainable systmes. This vision would allow for foundations to be established beyond the form versus process schism by including non-design disciplines in team thinking.

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