Meaningful Urban Design: Teleological/Catalytic/ Relevant

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INTRODUCTION

The field of urban design is in a state of flux. Variously described as an ambiguous overlap of the fields of architecture, landscape architecture, urban planning, and civil engineering on the one hand, and a generalist who helps design cities on the other, urban design lacks a clear definition (and hence, a useful understanding) and a clear direction (and hence, a useful purpose).

Simultaneously, the United States is witnessing an urban revival, as demonstrated by renewed interest in revitalizing inner cities, an expanding market for urban housing, the prominence of cities in popular magazines such as *Newsweek* and popular television programs such as *Seinfeld*, a resurgence of urban design curricula at leading universities such as Berkeley and SCI-ARC, and a recent influx of international urban design journals including the Journal of Urban Design, Urban Design International and Urban Design Quarterly. Seminal books, including The Next American Metropolis, Great Streets, and Post-Modern Urbanism, have attracted much attention in the past decade. Several large-scale urban projects have been built recently or are currently underway in metropolitan regions such Detroit (e.g. Detroit Lions and Tigers stadiums, Renaissance Center renovations, new casinos); in the United States (e.g. Getty Center in Los Angeles, neo-traditional residential developments, conversion of military bases and obsolete industrial areas); and in the world (e.g. London's Docklands, Hong Kong Airport, the rebuilding of Beirut and Berlin).

Unfortunately, much of this recent interest in urban design repeats the familiar deficiencies of the past: a focus on the superficial aesthetics and the picturesque aspects of cities (instead of what role aesthetics play, say, in community development processes), an overemphasis on the architect as urban designer and an obsession with design (instead of a more profound interdisciplinary approach that addresses first causes), an understanding of urban design primarily as a finished product (instead of an ongoing long-term process intertwined with social and political mechanisms), and a pedagogical process that is comfortably rooted in architecture and design (rather than in the experiences, processes and evolution of cities).

I argue for a movement away from this obsession with the architect's focus on image in urban design; toward a focus that is more on the "urban" than on the "design" in urban design; and for an urban design that begins and ends with the complex and rich dynamics of the contemporary city, rather than with physical form. Thus, an urban designer is not simply an architect, landscape architect, or planner who has an interest or has built projects in cities, but one who has a sophisticated and deep understanding of cities and of the substantive contribution that urban design can make to cities.

Furthermore, few contemporary urban designers demonstrate a fundamental understanding of the complex ways in which cities function. Especially glaring is a naiveté at best, an ignorance at acceptable, and a resistance at worst, of understanding power structures (i.e. who, how and why are critical decisions made about the pattern of investment in cities) and where urban designers fit (i.e. usually marginalized) within such a power structure, dominated as it is by elected officials, local bureaucrats, and prominent developers.

Based on a new synthesis of existing ideas, I propose a meaningful approach to urban design (i.e. one that is truly consequential in improving quality of life), that consists of: being teleological (i.e. driven by purpose rather than defined by disciplines), being catalytic (i.e. generating or contributing to long-term development processes), and being relevant (i.e. grounded in first causes and pertinent human values). In this new synthesis, urban design is circumscribed primarily by *urban* scale and complexity, and rests upon an *interdisciplinary* set of skills, methodologies, and bodies of knowledge.

TELEOLOGICAL

In this notion of urban design, it is an ongoing process with built form products (e.g. open spaces, blocks, streets, neighborhoods) along the way. The primary purpose of teleological urban design would be the improvement of the fundamental quality of life (i.e. socio-economic development), rather than just the quality of urban form. The quality of life is not concerned as much with what a built environment *looks* like, as with how a built environment *works*, in terms of the community, the economy and increasing mutually beneficial international exchange. For example, an urban design project should empower its users (i.e. community development), strengthen the local economy (i.e. economic development), and foster international understanding, opportunity and exchange (i.e. international development). The table on the next page further articulates these purposes of teleological urban design, and the case studies which follow illustrate these ideas.

Specifically, a teleological urban design would address three critical aspects of the urban experience, which are the relationships between the city and the economy, the city and society, and the city and power. The relationship between the city and the economy considers the economic functioning of the city, including the city as a point in the production landscape as well as a site of investment, the changing international division of labor, and the consequent effects on the specific urban economies. The relationship between the city and society focuses on the city as an arena of social interaction, the distribution of social groups, residential segregation, the construction of gender and ethnic identities, and patterns of class formation. The relationship between the city and power is the representation of urban structure and political power, and considers the city to be a

system of communication, a recorder of the distribution of power, and an arena for the social struggles over the meaning and substance of the urban experience.

CATALYTIC

Urban design projects and processes would generate or contribute significantly to three types of socio-economic development processes: community development, economic development, and international development, while simultaneously enhancing the built environment of cities.

Urban design and community development

Urban design as a catalyst for, or as an active component of, community development requires intelligent community participation in projects which is facilitated by dialogue between community representatives and urban designers and community leadership which is representative of community views; inclusion of institutional partnerships (e.g. between private and nonprofit sectors) and decision-making structures (e.g. simulations and games) that lead to enabling urban environments; and the soft-programming of urban design (e.g. incorporation of public expression and cultural identity, and activities, events, programs and services integrated with the built forms).

For the urban designer, design communication is inherent in the act of design, both as internal communication in the thinking process, and as an external communication with the client, user or broader community. The people within a given context, such as homeowners in a residential neighborhood or business owners in a commercial downtown, are the agents of change, aided by a communication process that speaks to the formal aspects of their environment. The better this communication process of design, the higher level of public awareness and sense of ownership, the better the internal decisions of change. There are conventional public involvement formats such as public hearings, city council meetings, and planning commission presentations. There are also informal meetings, workshops and brainstorming sessions. One of the most powerful and effective mechanisms for active and intelligent community participation is the charette.

A charette is a short and intense workshop, of a day or at the most a few days, in which the urban design team works with a local community and its social, economic or political leaders to arrive at a conceptual and implementation strategy for a particular project. The effectiveness of this community participation methodology and the often surprising results it generates have been well documented by Douglas Kelbaugh (1997) in a series of charettes in the Seattle region. The Urban Design Group (1998) provides a series of clear, concise, and extremely useful community participation forums, including innovative mechanisms such as street stalls and interactive displays. The popularity of the computer program SimCity, a city building simulator, attests to the possibility of designing urban simulation models with broad public appeal. Whether one is teaching urban processes and structures, analyzing specific urban problems, or most importantly, involving the public in urban design and planning processes, SimCity displays a vast, untapped potential of urban design games and simulations. These examples point to creative, engaging and beneficial forms of not only community participation, but more significantly, community development, because they increase community awareness, generate community strategies, and suggest modes of community intervention in the future of their own environments.

Another approach to such long-term processes of community development is illustrated by the Hismen Hin-nu Terrace housing project in Oakland, California (Jones, Pettus & Pyatok, 1995). With a grant from the City of Oakland, the architectural firm of Pyatok and Associates studied development scenarios for housing and neighborhood services on several sites in the city. The San Antonio Community Development Council, serving African-American, Latino and Native-American residents, expressed interest in developing affordable housing for families and seniors on one of the sites, and joined with the East Bay Asian Local Development Corporation, which serves the Asian-American community. Pyatok and Associates organized a series of workshops using participatory modeling kits to help over 30 neighborhood participants to design plans for the site and to understand the implications of density.

Urban design and economic development

Urban design as a catalyst for, or as an active component of, economic development involves designing projects that generate employment on a long-term basis, attract investment into deprived areas, and increase business and tax revenues. In this context, a city is not only a spatial concentration of a large number of people, it also contains a density of economic activities. Urban designers can be more effective if they understand, and indeed encourage, beneficial economic activities through physical projects.

The Horton Plaza, a highly successful shopping center in San Diego, generated jobs for local residents, when city officials utilized their position as investors in the project to negotiate for positions. The mayor of the city turned to the Private Industry Council of San Diego County, a training and placement organization, to find jobs for low-income and unemployed San Diegans in Horton Plaza and other city-assisted development projects. The Council then served as the main employment office for Horton Plaza. By March 1986, store openings created nearly 1,000 new jobs, and the council filled half of them. Of the people placed by the Council, 70% were minority workers, and 60% came from targeted high-unemployment, low-income neighborhoods.

Lower Downtown, Denver's most exciting commercial submarket in recent years, provides one model for the economic reinvestment and revitalization of other historic commercial districts (Segal, 1995). The success of this area is based on an understanding of fundamental changes in the marketplace and public policies designed to complement market forces, and represents an incremental, project-by-project development approach that urban designers can adopt. In 1987, the Downtown Denver Partnership, a nonprofit business leadership organization, established the Lower Downtown Business Support Office to provide services such as business counseling to develop business plans, marketing strategies, and management expertise; leasing referrals to direct prospective tenants to available space; and the design and implementation of public/private, layered financing strategies for individual projects. Financial support was provided by the city of Denver, the state government's job training office, and corporate and foundation grants.

A historic district ordinance contributed to Lower Downtown's success by creating certainty in the marketplace. Small business and entrepreneurial investors were lured to the area by its scale and historic character, and the knowledge that it will remain that way. The city's investment of \$1.9 million in streetscape improvements, including new lighting, sidewalks, and street furniture, which was contingent upon the adoption of the historic district ordinance, also reinforced private investment in Lower Downtown. District stakeholders — including developers and property owners — are represented on the 5-member design review committee, which is now seen as beneficial to the area because of its localized control. In four years, the Lower Downtown area, through the various strategies described above, has attracted more than \$15 million in new investment, 500 jobs and a nearby baseball stadium.

Urban designers can learn to design environments that increase revenues by studying the strategies adopted by the often maligned or overlooked designers of shopping centers, gambling casinos and amusement or theme parks. All of these environments are successful to their owners and operators when they increase revenues, often in a remarkable manner. The American landscape architect Robert Gibbs is one such member of this rare breed (Lagerfeld, 1995). According to Gibbs, a town's retail planning should begin where a shopping center's does; far from the selling floors. For example, it is disadvantageous to locate a shopping center in a place where commuters have to make a left turn. People tend to shop on their way to work, and they are less likely to stop if it involves making a turn against traffic. Most significantly, shopping center designers know the average shopper (as the urban designer should know their clientele and constituencies), and understands that most shoppers stroll at about 3 to 4 feet per second, thus walking past a storefront in about 8 seconds. That is how long a shop owner has to attract a consumer's attention with an arresting window display. Downtown merchants must adapt to the same 8-second rule, but they also have to sell to passing motorists. In addition to creating environments that encourage certain types of behavior such as consumer spending, urban designers can focus on other types of behavior, such as the creation of neighborhoods that foster greater social interaction and mutual understanding amongst different ethnic groups.

Urban design and international development

Urban design as a catalyst for, or as an active component of, international development takes the guise of sensitivity to context, the generation of cross-cultural learning, and directly addressing issues which arise out of the continuing phenomenon of economic globalization.

A seminal essay which suggests an approach which is sensitive to local context without resorting to mimicry, and which is contemporary without being a generic modernism, is "Critical Regionalism: Modern Architecture and Cultural Identity" by Kenneth Frampton (1992). The contemporary paradox of sensitivity to context is that on the one hand, the region or locality has to root itself in the soil of its past, forge a regional spirit, and display this spiritual and cultural revendication before the modernist personality. However, in order to fully participate in modern civilization, it is necessary at the same time to take part in scientific, technical and political rationality, something which very often requires the abandonment of major portions of a whole cultural past. Thus, how can contemporary urban design celebrate an ancient tradition and return to sources, while simultaneously becoming modern and participating in universal civilization?

Drawing upon the work of the French philosopher Paul Ricoeur, Frampton (1992, pp. 314-315) proposes a process of assimilation and reinterpretation, wherein sustaining any kind of authentic culture in the future depends upon our capacity to generate vital forms of (e.g. via urban design) of regional culture while appropriating alien influences at the level of both the local and the global. Alvar Aalto's work is exemplary of such processes, especially the Saynatsalo Town Hall in Finland. The collective memory evoked by the Saynatsalo Town Hall refers to two fundamental cultural traditions: the indigenous, largely agrarian one, and an alien, essentially classical one. With its steps, overgrown with grass and weeds, its variations of silhouette, and its weathered materials, Saynatsalo has the air of an ancient complex of buildings which had grown slowly. Indeed, Aalto had identified this rather unique parti of a 'growing ruin' in his 1941 essay Architecture in Karelia, by suggesting the a "dilapidated Karielan village is somehow similar in appearance to a Greek ruin, where, also the material's uniformity is a dominant feature, though marble replaces wood" (Aalto cited in Inam, 1992, p. 63).

Apart from evoking the memory of indigenous environments, Aalto remained faithful to the belief that a motif borrowed from a different context and transplanted with sufficient conviction onto Finnish soil became genuinely Finnish. The Italian Renaissance was for Aalto an inalienable part of his heritage and philosophy of life. In his view, providing the inhabitants of Saynatsalo with a setting in which they could live much as the inhabitants of 14th century Sienna did was a natural act. When the members of the municipal board of building inquired if a small, poor community like theirs really needed to build a council chamber 17 meters high, especially since the brick was expensive, Aalto responded that the world's most beautiful and famous town hall in Sienna had a council chamber 16 meters high, and thus he proposed to build the one at Saynatsalo 17 meters high! Moreover, Aalto explicitly referred to the courtyard as a piazza inspite of the fact that it is domestic both in nature and in scale.

The phenomenon of increasing economic globalization is rapidly growing and has been encouraged at the urban level. For example, in American cities such as New York, Los Angeles, Houston, and Minneapolis, where foreign investors have been active in buying real estate, downtown real estate interests - brokers, commercial banks, real estate consultants, and property owners --- have welcomed international property investment. Throughout the 1980s the infusion of foreign capital into the buying and selling of existing buildings and the construction of new building bolstered commercial property markets by raising rents, increasing property values, and generally expanding business opportunities. The interaction of forces operating at various spatial scales --- especially the urban --can be illustrated in a variety of ways: the construction of an office building for a foreign bank using materials from around the world; the dynamics of a major research university whose architecture and urban planning faculty consult locally as well as internationally; and the corporate plan location and contracting strategies of multinational corporations such as Nike and Cocoa Cola, as they balance local labor conditions, regional locational advantages, national markets, and international investment opportunities.

The ongoing phenomenon of globalization suggests some strategies for urban designers. Urban designers must be able to understand and react to influences impinging on their communities, regardless of where those influences originate (e.g. World Bank funded housing projects in developing countries) and which actors are responsible (e.g. American architectural firms designing office complexes in London). Furthermore, urban designers must develop associations and networks that extend beyond their spatial reach through collaborative endeavors and thereby provide another mechanism for responding to the multitude of actors who shape their communities. For example, the Indian architect B.V. Doshi utilized an institution, the Vastu-Shilpa Foundation for Studies and Research, to develop an internationally (i.e. World Bank) funded local (i.e. in the city Indore) housing project in India, Aranya Nagar (Serageldin, 1997). The project has been largely a success due to the Vastu-Shilpa Foundation, which carried out considerable research, including surveys to understand the physical and economic factors that determine the size, type and density of the housing plots that were specific to the local context.

RELEVANT

Urban design that is relevant is urban design that is pertinent to matters at hand (e.g. critical urban issues), and that is based on fundamental human and natural conditions. In this section, I highlight three such relevant approaches to urban design: a) a history of urban form that analyzes the determinant processes and human meanings of form, b) a theory of urban form that is normative and based on human values, and c) a design methodology of urban form that is empirically based and derived from patterns of human behavior. I discuss these three approaches by illustrating them with the work of Spiro Kostof (1991), Kevin Lynch (1981) and Christopher Alexander (1977), but by no means does this suggest that these are the *only* such approaches in urban design. Indeed, there exist other relevant approaches to urban design (for example, see Rowe, 1991), but for the illustrative purposes of this paper, the three examples mentioned above will suffice.

Spiro Kostof (1991) studies the phenomenon of city making in a historical perspective, to consider how and why cities took the shape they did. Amalgams of the living and the built, cities are repositories

of cultural *meaning*. Behind the arbitrary twist of a lane or the splendid eccentricity of a new skyscraper on the skyline lies a history of previous urban tenure, a heritage of long-established social conventions, a string of often bitter compromises between individual rights and the public will. In a series of discussions of urban patterns such as the grid and the city as diagram, Kostof adopts a truly interdisciplinary approach by drawing upon architecture, cultural geography, and social history to interpret the hidden order ascribed in these patterns.

As an example, let us consider the grid. The grid is by far the commonest pattern for planned cities in history, and it is universal both geographically and chronologically (Kostof, 1991, p. 95-96). No better solution recommends itself as a standard scheme for disparate sites, or as a *means* for the equal distribution of land, or the easy parceling and selling of real estate. The advantage of straight through-streets for defense has been recognized since Aristotle, and a rectilinear street pattern has also been resorted to in order to keep under watch a restless population. However, ubiquitous as the grid has always been, it is also much misunderstood, and often treated as if it were one unmodulated idea that requires little discrimination. On the contrary, the grid is an exceedingly flexible and diverse system of planning, and hence its enormous success in urban design and planning. About the only thing that all grids have in common is that their street pattern is orthogonal; that is, the right angle rules, and street lines in both directions lie parallel to each other.

However, for the conventional urban designer, a grid is a grid is a grid (Kostof, 1991, pp. 10-11). At best it is a visual theme upon which to play variations: he or she might be concerned with issues like using a true checkerboard design versus syncopated block rhythms, with cross-axial or other types of emphasis, with the placement of open spaces within the discipline of the grid, with the width and hierarchy of streets. To Kostof and the meaningful urban designer, on the other hand, how, and with what intentions, the Romans in Britain, the builders of medieval Wales and Gascony, the Spanish in Mexico, or the Illinois Central Railroad Company in the prairies of the Midwest employed this very same device of settlement is the principal substance of a review of orthogonal planning. In fact, the grid has accommodated a startling variety of social structures - including territorial aristocracy in Greek Sicily, the agrarian republicanism of Thomas Jefferson, the cosmic vision of Joseph Smith in Mormon settlements like Salt Lake City, Utah ---and of course, capitalist speculation.

Urban form is related directly to urban process; i.e. the people, forces and institutions that bring about urban form (Kostof, 1991, p. 11), and a way to examine this process is to ask probing research questions which are the basis for truly understanding cities. For example, who actually designs cities? What procedures do they go through? What are the empowering agencies and laws? The legal and economic history is an enormous and often overlooked subject. It involves ownership of urban land and the land market; the exercise of eminent domain, which is the power of government to take over private property for public use; the institution of legally binding master plans; building codes and other regulations; instruments of funding urban change, like property taxes and bond issues; and the administrative, and more importantly, the power structure of cities. Urban designers need not know all of this information, but they do need to realize the importance of it, why it is important, to know where to turn to obtain it, and to consider it in their designs.

There have been few serious attempts at a comprehensive and normative theory of urban form. *Good City Form* is an impressive and courageous attempt by Kevin Lynch as a "systematic effort to state general relationships between the form of a place and its value" (Lynch, 1981, p. 99). Lynch emphasizes "those goals which are as general as possible, and thus do not dictate particular physical solutions, and yet whose achievement can be detected and explicitly linked to physical solutions. This is the familiar notion of performance standards, applied at the city scale" (Lynch, 1981, p. 108). Lynch generalizes performance dimensions, which are certain identifiable characteristics of cities due primarily to their spatial qualities and are measurable scales along which different groups achieve different positions.

In Lynch's theory of good city form, there are seven basic dimensions (Lynch, 1981). First is vitality; the degree to which an urban form supports the vital functions, the biological requirements, the capabilities of human beings, and protects the survival of the species (e.g. adequate throughput of water, air, food, energy). Second is sense; the degree to which an urban form is clearly perceived and mentally differentiated as well as structured in time and space, and the degree to which that mental structure connects with the residents' values and concepts (e.g. distinct identity and unconstrained legibility). Third is fit; the degree to which urban form matches the pattern and quantity of actions that people usually engage in or would like to engage in (e.g. compatibility between function and form). Fourth is access; the ability to reach other people, activities, resources, or places, including the quantity and diversity of the elements that can be reached (e.g. ease of communication and transportation). Fifth is control; the degree to which the creation, access, use, maintenance, and modification to urban spaces and activities is managed by those who use, work or live in them (e.g. local power). Sixth is efficiency; the cost of creating and maintaining an urban form (e.g. less energy-demanding processes). Seventh is justice; the way in which urban form costs and benefits are distributed among people, according to a principle such as intrinsic worth or equity (e.g. equal protection from environmental hazards such as automobiles).

Christopher Alexander (1977) adopts a problem-solving approach to design and explicitly renders the design methodology, but more importantly, describes how a meaningful urban designer might draw directly from extensive research as a source of design. The book is most useful as a series of thoroughly analyzed and empirically based guidelines, which are broad enough to be adapted to different contexts and architectural styles. Each suggested solution is described in a way that provides the key relationships (e.g. between human behavior and spatial setting) needed to solve the problem, but in a general enough manner to allow for adaptation to particular lifestyles, aesthetic tastes, and local conditions. Each pattern describes a problem which occurs repeatedly in the built environment; archetypal problems of urban form, for example. The longest portion of the description of each pattern describes the empirical background of the pattern, the evidence for its validity, and the range of different ways the pattern can be manifested or designed.

The first 94 patterns deal with the large-scale structure, including the urban, of the environment: the growth of city and country, the layout of roads and paths, the relationship between work and family, the formation of suitable public institutions for a neighborhood, and the kinds of public space required to support these institutions (Alexander et al., 1977, p. 3). The following two examples of urban patterns illustrate the value of this design methodology: identifiable neighborhood, and public outdoor room.

According to Alexander, his co-authors (1977, pp. 80-85), and the scientific research they cite, people need an identifiable spatial unit to belong to. They want to be able to identify the part of the city where they live as distinct from all others. Available *evidence* suggests, first, that the neighborhoods which people identify with have extremely small populations; second, that they are small in area; and third, that a major road through a neighborhood destroys it.

What then, is the right population for a neighborhood? The neighborhood inhabitants should be able to look after their own interests by being able to reach agreement on basic decisions, such as about public services and common land, and to organize themselves to bring pressure on local governments. Anthropological evidence cited by Alexander et al. suggests that a human group cannot usually coordinate itself to reach such decisions if its population is above 1,500. The experience of organizing community meetings at the local level suggests that 500 may be a more realistic figure.

As far as the physical diameter is concerned, in Philadelphia, people who were asked which area they really knew usually limited themselves to a small area, seldom exceeding the two or three blocks around their house. One-quarter of the inhabitants of an area in Milwaukee considered a neighborhood to be an area no larger than a block, around 300 feet. One-half considered it to be no more than seven blocks.

The first two features of the neighborhood, small population and small area, are not enough by themselves. A neighborhood can only have a strong identity if it is protected from heavy traffic. Research cited by the authors suggests that the heavier the traffic in an area, the less people think of it as home territory. Not only do residents view the streets with heavy traffic as less personal, but they feel the same about the houses along the street: "It's not a friendly street ... People are afraid to go out into the street because of the traffic ... Noise from the street intrudes into my home" (cited in Alexander et al., 1977, p. 83). This study, conducted by the University of California at Berkeley, found that with more than 200 cars per hour, the quality of the neighborhood begins to deteriorate.

Therefore, the proposed strategy suggests that to help people define the neighborhoods they live in, not more than about 300 yards or so across, with no more than 500 inhabitants or so. In existing cities, encourage local groups to organize themselves to form such neighborhoods, and keep major roads outside these neighborhoods. While one may disagree with the dimensions suggested in this pattern, one has to acknowledge that population size, physical area, and traffic flow are critical considerations for the design of contemporary neighborhoods.

FUTURE DIRECTIONS IN URBAN DESIGN

Urban designers are beginning to question what in fact is 'urban' in the contemporary environment. However, few will argue with two decades old definitions that are still relevant today: A city is a "relatively large, dense, and permanent settlement [or network of settlements] of socially heterogeneous individuals" (L. Worth cited in Kostof, 1991, p. 37), and a "point [or points] of maximum concentration for the power and culture of a community" (L. Mumford cited in Kostof, 1991, p. 37). The urban designer's imperative, then, is to understand cities. On the one hand, the most enduring feature of the city is its physical build, which remains with remarkable persistence, gaining increments that are responsive to the most recent economic demand and reflective of the latest stylistic vogue, but conserving evidence of past urban culture for present and future generations. On the other hand, however, urban society changes more than any other human grouping, economic innovation usually comes most rapidly and boldly in cities, immigration aims first at the urban core forcing upon cities the critical role of acculturating refugees from many countrysides, and the winds of intellectual advance blow strong in cities (Vance cited in Kostof, 1991, pp. 40-41).

In the new synthesis of ideas proposed in this paper, there are three levels of the success of an urban design project. These include first, the purely aesthetically-informed notion of urban design as a finished product (e.g. Does it look good?). The second is the sense of the project as an autonomous object that functions in an affordable, convenient and comfortable manner for its users (e.g. Does it work?). The third, and new idea, is to have the urban design project generate or substantially contribute to socio-economic development processes (e.g. Does it produce long-term quality of life impacts?). In this sense, urban designers and urban design projects become catalysts for community betterment, economic improvement and international understanding.

Consequently, urban designers should focus more on the "urban"

of urban design, and become less infatuated with the "design" of urban design. Urban design must begin with cities—how they work, change, and what impacts they have in creating enabling versus destructive impacts. For example, urban design has to be seen within the framework of investment and development policies, and as a shaper of those policies: David Crane's (1966) capital web of investment decisions, and Richard Tseung Lai's (1988) invisible web of laws and norms that guide people's behavior. At the same time, design and form play a critical role because are a language and vocabulary for analyzing and intervening in cities.

At the most fundamental level, all urban design should be responsible for creating an environment that satisfies, informs and inspires its users (i.e. the community). This is an urban design that possesses an articulate communicative proficiency. Urban design of profound significance has a poetic quality. By the means of compressing its meanings into a concise formal expression, a poetic urban design project draws the mind to a level of perception concealed behind the conventional presentations of urban form. The most effective symbols are those which, while operating within a given set of conventions, are imprecise, sparse and open-ended in their possible interpretations, tending more to the metaphor than the simile. Such an approach requires deep cultural understanding and social sensitivity.

Implications for education

The pedagogical approach to meaningful urban design will be interdisciplinary (e.g. examining cities from the perspectives of architects, landscape architects, urban planners, policy makers, social workers, and business interests); teleological (e.g. driven by the express purpose of addressing critical urban challenges such as uncomfortable and unsafe built environments, community powerlessness, economic deprivation, and fragmented interventions); critical (e.g. based on in-depth understanding of urban design problems and promises through analysis of urban design practice and case studies), and catalytic (e.g. the formulation of effective urban design strategies that include a focus on urban design products such as building complexes and public spaces, but also include the generation of long-term community and economic development processes).

The primary impact on this type of learning for students will be an understanding of the urban designer as a leader. Through an indepth analysis of urban issues, an interdisciplinary approach to urban problem-solving, and skills that focus not only on issues of urban aesthetics and form but also on purposeful intervention generated by long-term processes, students will gain a profound and empowering understanding of meaningful urban design. Students of urban design will also gain humility and confidence by studying the power structures of cities (and realizing just how little power urban designers actually have), practicing critical thinking, and learning to be politically savvy in order to accomplish their goals. A secondary impact on learning for students will be a unique opportunity for them to shape the future direction of urban design through readings, research, discussions, case study analyses, and project designs that will focus on specific urban challenges, examine deficiencies in current urban design approaches and projects in addressing those challenges, and formulate alternative, more meaningful, urban design strategies.

In order to reach such goals, an urban design program should focus on two major sets of skills: understanding how cities work, and learning to shape cities. Understanding cities includes their conception (e.g. urban theory and form), their evolution (e.g. history of urban form), their decision-making processes (e.g. urban politicaleconomy), and their use and experience (e.g. urban sociology). Learning to shape cities includes design methods (e.g. based on empirical evidence and community participation), and communication skills (e.g. graphic, verbal, written, and computer-based). The goal of a meaningful urban design pedagogical initiative would be to attract students of the built environment (e.g. architects, landscape architects, and urban planners) who will become sophisticated practitioners and influential leaders of urban design in architectural and planning firms, community organizations, public agencies, and international institutions. The initiative would thus involve: a) teaching of exploratory seminars and studios in new urban design methodologies (e.g. international studios), b) research into the relevant roles of professionals, especially architects and planners, in the urban design of contemporary cities (e.g. institutional structures), and c) professional work, in form of community outreach and project analysis (e.g. evaluating New Urbanism).

In summary, a meaningful pedagogical approach to urban design should have the following characteristics: a) small (i.e. selective): focus on key urban design challenges - e.g. inner city revitalization, b) focused (i.e. depth): develop expertise in the urban design/ urban development nexus, c) distinct (i.e. cutting edge): experiment with new studio formats, projects, research - e.g. international collaboration and cross-cultural learning, and d) existing resources (i.e. breadth): build upon other departments-e.g. social work, business, natural resources and environment. The critical question that guides this meaningful future of urban design is: So what? That is, what consequential purpose has been achieved by particular urban design theories, urban design methodologies, urban design practices, and urban design practitioners? The implication of such probing questions is that it is far from adequate to consider urban design projects as successful if they are only physically appealing or thought provoking.

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