THE UNPLANNED CITY: PRESERVING PLACE THROUGH URBAN MAKING

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[New spaces of habitation] build upon the shattered form of the old order a new category of order inherent only in present conditions, within which existence feels its strengths acknowledges its vulnerabilities and failures, and faces up to the need to reinvent itself as though for the first time.[1] - Lebbeus Woods

The American City is changing. For a long time it has been shrinking as populations evacuate the center[2] in favor of the ex-urban periphery.[3] However, recent evidence suggests that the trend may be slowing, or even reversing.[4] This reality presents opportunities to transform our cities, but it demands a shift in the priorities of architects and planners.

For the past six decades[5] there has been an ever-decreasing consideration of urban culture[6] in the development of American cities. Those characteristics of urban life that mark one place as distinct from all others are being compromised by the way we construct our urban environments. Architects continue to entertain an obsession with buildings as self-referential objects. The novelty of "genius" design[7] reduces buildings to theme-based destinations,[8] and the city to a simple means of transportation. Often students regard the city as a patterned street grid with buildings dispersed throughout. Can a slight shift in thinking – regarding the city as a collection of interrelated and interconnected buildings – yield a result that is more conducive to an architecture of a place? Another force acting against the preservation of urban cultures is the indiscriminate efficiency of mass production. Although this seems to be in stark contrast to the individualistic nature of self-referential architecture, it is equally removed from any considerations of the culture of a place. Increasingly one team of designers will be responsible for creating entire urban districts[9] without regard to the traditions of the people that live there. This authoritarian practice has resulted in homogeneous built environments[10] that are divorced from the realities of the way people live.

Practices like these erode the sense of place and community. Local traditions evolve over time and are directly correlated with the development of the built environment in which they take place. The immediacy of contemporary urban development isn't dictated by the needs or desires of a populace, but is more autocratic in nature. As these practices continue, characteristics that define a place as unique are lost. It begins to look like every other urban environment weakening social bonds that tie individuals to a place.

The recent, subtle changes of the American City may mark the possibility for resurgence of urban culture in the United States. For this transformation to be sustained, the designers responsible for the growth and development of our cities must alter their priorities toward more "organic" urban responses. This places contemporary architectural education in a pedagogical predicament. Establishing a sensibility of architecture as being a designed response to surrounding conditions will be difficult, at the very least. In a discipline that prides itself on innovation, acknowledgement and appreciation of existing conditions seems counterintuitive.

Roles architecture plays in urban transformation are varied. Architecture that doesn't consider characteristics of local culture will disrupt a city's evolution.[11] This architecture is a component of a planned city that supplants local traditions with a contrived image of urbanity; the city becomes "theme park."[12] However, an architecture that builds from existing conditions is one that has the potential to foster social interaction and cultivate a sense of community.[13] It contributes to an unplanned city; one that evolves according to the changing needs of a populace rather than by abstract formula, or ideological agenda.

How can architecture facilitate unplanned change? Can the city be transformed at the scale of individual buildings, or are these practices forever relegated to urban planners working at the scale of districts? Is there a way to reestablish the role of the architect as urbanist through design education? These questions frame a proposal for design pedagogy that explores the potential of architectural intervention to act as a catalyst for the growth of the American City.[14]

PEDAGOGY FOR GENERATIVE MAPPING

Stations and Paths together form a system. Points and lines, beings and relations… A complex system can be formally described.[15] - Michel Serres, from the opening to Points and Lines by Stan Allen

How does one incorporate a sensibility for contextual response into a design studio of a discipline so dedicated to isolated innovation? In order to address this pedagogical concern, this paper proposes strategies for addressing fundamental compositional issues of the city in architectural education. Of special interest is a technique for generative mapping, the architecture that results from it, and the potential of this design process to affect the transformation of the city while preserving its unique character.

The primary goal of this pedagogy is to introduce design ideas that position architectural intervention as a single component of a more complex system. In it, city is understood as interrelated systems, both cultural and physical. These issues are addressed in simple, compositional terms. The goal is not to introduce advanced topics of urban theory, but rather to instill within the architecture student a basic ethic for considering relationships between designed intervention and surrounding context.

Studios implementing it depend as much on technique as knowledge. Generative mapping is used to document and analyze urban form and cultural traditions. Synthesizing different facets of the urban context, within a common graphic language, enables the student to understand social drivers of urban form. The act of mapping guides the design of an architectural intervention that responds to multiple site forces. Can architecture be at once generated by the constraints of its surroundings and a force for directing their transformation?

This methodology identifies two positions to avoid. First is the use of contextual response as an excuse for willful formalism. This position is one in which students are compelled to use irrelevant or obscure contextual characteristics as justification for idiosyncratic, novel, or self-referential design. The complexity of cities provides innumerable opportunities for post-rationalized decision making enabling students to derive justification for architecture that is primarily a vehicle of self-expression. This kind of formalism is by its nature detached from the city in that it doesn't respond to the demands of the people that are to inhabit it. Second is the fabrication of historicism logic based on the imagery of a city. This position uses context as a kind of pattern book and leads to designs that are amalgamate replications of existing structures. It removes any accountability from the student as their decisions are strictly scripted by the image of material, ornament, and program of surrounding buildings. Design of this nature is also detached from the city in its disregard for spatial, formal, and programmatic systems.

Instead, students should understand fundamental relationships that comprise the systems of the urban environment and base design decisions on those. Students must be encouraged to observe the proximity of structures to the street edge, and to one another; the degree of transparency in façades and the way they are divided; places of gathering, movement, and other conditions of public space; scale of buildings and details. More than this, students need to realize the way these characteristics are derived from, or affected by, cultural practices of the citizens of a place.

Because of this, figure-ground is not enough to understand urban fabric. To expand student awareness of the urban environment, mapping begins as a guide for student observations of context incorporating morphological, compositional, and programmatic characteristics. It is a first step in instilling an understanding of architecture as urban unit. Within this mapping, buildings are seen as interrelated components contributing to the operation of the larger systems that constitute the city.[16] This kind of documentation is both analytical and generative in nature.

The analytical facet of generative mapping is embodied in the act of isolating characteristics of the urban environment and studying them independently of one another. To this end the context of architectural intervention is investigated relative to the characteristics of the map, and a better observed understanding of the way a group of people tends to inhabit their own built environment.

WHY NOT CINCINNATI?

> If the world comes to an end, I want to be in Cincinnati. Everything comes there ten years later.[17] - Unknown

The City of Cincinnati is used as case study for the implementation of this pedagogy. In many ways it is representative of the typical American City making it an ideal testing ground for design thinking relative to urban response.

Cincinnati was once the city known as "The Paris of the West."[18] Now it is a city seldom considered. It was once a thriving metropolis that has become a quintessential example of decline. It is a ghost of what it used to be. Vacant buildings stand as a testament to its history, while others are razed to make way for fields of daytime parking. It is now a nine to five city.

It is also a city that is aware of its rich past, and looks to it as a goal. It is a city with hope for redemption. "Why not Cincinnati?" is a question that speaks to its continuing inability to resurrect itself, while simultaneously looking toward the possibilities of a better Cincinnati.

The downtown is growing for the first time in decades.[19] But there is a lack of housing for those residents that are creating that growth, young urbanites beginning their professional lives. This studio project seeks to recall the vision of "The Paris of the West" by looking to, and in ways emulating those European urban conditions to which Cincinnati once aspired. In it, students investigate the spatial and social relationships between housing and urban public space. They seek to integrate multiple programmatic components into a densely arranged structure that would act to contain communal open space. The goal for this project is to create a place in which community can thrive. Integrating these functions of the urban landscape provides a vehicle for the development of community. Students are to anticipate their projects as being a catalyst for the reinvention of this great city.

APPLICATION

> The city is seen as a gigantic man-made object, a work of engineering and architecture that is large and complex and growing over time.[20]
> - Aldo Rossi

In a studio dedicated to investigating relationships between civic and domestic space in Cincinnati, Ohio, students use generative

mapping as preliminary investigation prior to beginning the project. This mapping exercise will establish a set of constraints to which their projects will adhere. The mapping component is a collaborative effort wherein the students work together to build a common body of information to be shared by the group.

Each student, or group of students, is given a very specific urban characteristic[21] to document in precisely measured detail. These characteristics are divided amongst Morphological, Compositional, and Programmatic categories.

Morphological Characteristics

- *Materiality* – this student/group is responsible for recording material applications in buildings and public spaces surrounding the assigned site. The goal is to define typical material uses, chart shifts in material applications across territories of the urban fabric, and define experiential effect of different materials over different sectors of the city (i.e. thresholds through thick or thin walls, light reflection in exterior and interior spaces, material texture, etc.)

- *Scale* – this student/group is responsible for documenting scale shifts from one part of the city to another. This includes defining territories based upon relative building scale, recording scalar anomalies within the urban fabric (i.e. a tower in a predominately three-story neighborhood), and relative size of exterior and interior spaces.

- *Aperture* – this student/group is responsible for mapping the street edge using openings in building facades. This includes differentiating opening types (i.e. openings for physical access, view, light), and mapping varying degrees of façade transparency. These characteristics often change in section, which is also documented.

Compositional Characteristics

- *Alignments* – this student/group is responsible for documenting instances of alignment (or misalignment) at a variety of scales. This includes the correlation between facades across streets, alignment of building fronts from one block to another, aligning details of fenestration in elevation, and mapping degrees of visual access from interior spaces to exterior conditions.

- *Edges/boundaries* – this student/group is responsible for mapping layers and edge conditions. This includes elements that compose boundaries between interior and exterior spaces, programmed layers of street edges, and the composition of elements that define boundaries of public civic spaces.

- *Graining* – this student/group is to map the street grid according to direction, hierarchy of transportation arteries, and modes of transportation used. This includes precise documentation of edge conditions that define relationships between vehicular and pedestrian traffic.

Programmatic Characteristics

- *Program* – this student/group is responsible for documenting functions of both interior and exterior spaces. These functions must reflect nuanced variations in domestic, civic, infrastructural, and commercial programs. Programmatic changes that occur with elevation must also be taken into account.

- *Infrastructural/environmental* – this student/group is responsible for mapping infrastructural aspects of the urban fabric. This includes mapping various utility services, public transportation, as well as topography and other environmental characteristics.

- *Behavior* – this student/group is responsible for recording frequency and density of gathering and social interactions as well as activities performed in the public realm. This ranges from small-scale conversations between individuals and large public gatherings. This also includes documenting the activities taking place. These should be recording according to length, frequency, and time of day.

The resulting mappings are overlaid and converted into compatible graphic conventions. It is in this synthesis of information that correlations and relationships are recognized between disparate urban systems. These correlations are the subtle forces that define place and manner of living.[22] They also provide the students with the necessary catalysts for design decisions relating to any intervention they might propose.

From this stage the project transitions into a stage where students design an intervention to this place. Students are to design a multi-use, multi-family housing project for a site assigned to them from within the territory they mapped. This project is to include a program for an open, public space. They are to use the urban characteristics discovered in the preceding mapping to generate program, spatial configuration, and formal characteristics of the building. They will also use this mapping as a way of understanding certain demographic information of the population likely to use their design.

To reinforce the sensibilities for systemic design response students are divided into pairs. They are each responsible for designing their own project in a non-collaborative way, but they are to share a single site. This forces them to develop a schematic master-plan strategy for the way they will divide the site. This also presents an opportunity for combined or shared public space between the two projects. The resultant proposals evolve according to information gleaned from the generative mapping, as well as the changing spatial/formal dialogue with their neighbor's project.

Throughout the studio students can decide to address the city with their project in one of three possible ways. First, is to respond to conditions as they are. Second, is to anticipate future conditions of the urban environment based upon researched trends in its development. Third, is to identify trends in the city development and propose a scheme that alters the course of that development. Students are asked to justify their decisions in research and to identify design strategies for implementing this response.

LEADING THE PROFESSION

[Architecture] constitutes the most concrete possible position from which to address the problem.[23] - Aldo Rossi

It is the role of the academe to lead the profession. Developing fundamental sensibilities for reading and responding to existing contextual conditions can lead to a generation of architects with the skill-sets to positively affect the development of America's urban centers. Intrinsic to contextual sensitivity is an understanding of the relationship between architecture and the culture of place. Designing spaces that exist as components of the larger urban systems around them can provide opportunities to foster and reinforce community structures. This kind of response occurs absent of style. Instead it must be derived from analysis and observation. Otherwise architecture will continually be based in ideological imagery and divorced from social forces that define a community of place. Buildings will be either willful exercises in form-making or nostalgic copies of pseudo-historic precedents.

Community is profitable. Community is one basis of identity and encourages personal investment in a place. By designing architecture that fosters these social structures we are able to engender value in a place that encourages long-term residence and attracts new populations to combat the shrinking of our cities. Density of population also encourages capital investment to ensure that resources are available to make this kind of organic urban development sustainable over time.

ENDNOTES

1   Lebbeus Woods writes about the "ethical and moral commitment in such an existence" of a place that is evolved from present conditions rather than replaced by an imposing design vision. This seemingly stands in contrast to woods' proposals, but the way in which he applies this logic to formal composition can also be applied to systemic integration. *War and Architecture: Pamphlet Architecture 15.* (New York: Princeton Architectural Press, 1993).

2   David Rusk thouroughly documents the expansion and contraction of urban populations in *Cities without Suburbs*. In this work he differenitates between "elastic cities and inelastic cities" based on the manner in which a city is able to redefine its boundary to accommodate population shifts. *Cities without Suburbs: A Census 2000 Update* (Washington D.C.: Woodrow Wilson Center Press, 2003).

3   Mario Gandelsonas develops diagrams that chart urban morphological change relative to population loss in *X-Urbanism*. He writes on the redefinition of urban peripheries "while the connecting suburban mechanisms (the car, the TV) transforms the private/

public/-/interior/exterior relationships, the marking of boundaries in the X-Urban city transforms the private/public/-/actual/virtual relationships." These transformed relationships are established by urban environements "disembodied" from socio-cultural conventions for inhabiting space. *X-Urbanism: Arhcitecture and the American City* (New York: Princeton Architectural Press, 1999)

4   The Brookings Institute Metropolitan Policy Program. *State of Metropolitan America: on the Front Lines of Demographic Transformation.* (Washington D.C.: The Brookings Institute, 2010)

5   David Stradling writes, "clearly the automobile would reshape cities in some way, city planners made certain that the influence would be dramatic." In Cincinnati specifically, the 1948 "*Metropolitan Master Plan* envisioned a new type of city, one reliant on limited access highways to relieve traffic congestion and spur growth." In the pursuit of this dream entire neighborhoods were razed to make way for the new highways and vast segments of the city's population displaced, taking with them the cultural cues that had, to that point, defined urban development. *Cincinnati: From River City to Highway Metropolis* (Charleston: Arcadia Publishing, 2003)

6   Mario Gandelsonas states that more affluent populations leaving city centers for newly formed suburbs "changes the demographic character of the *downtown* and starts the process of deterioration." A resulting phenominon is "the total abandonment of classical urban space and its replacement with image." *X-Urbanism: Arhcitecture and the American City* (New York: Princeton Architectural Press, 1999)

7   Joshua Prince-Ramus critiques the state of architecture in which it is seen as "created by an individual creating genius sketches" in his presentation for the TEDxSMU Conference in 2009. This divorce from "execution" has resulted in architectural novelty as architecture is reduced to nothing more than "authoring objects." He goes on to state that through "hyper-rational processes," – generative mapping being proposed here – "we can go back fifty years and start re-injecting agency, social engineering, back into architecture." *Building a Theatre that Remakes Itself.* (TEDxSMU, Dallas. 2009)

8   Marc Auge writes of "'non-places,' in opposition to the sociological notion of place… the idea of a culture localized in time and space." The danger of architecture created irrespective of culture is that the city around it becomes the in-between 'non-place' and architecture as mere destination. This marks the loss of unique urban character wherein the journey through the city is as much a considered experiential event as the ceremony of arrival. Non-Places: Introduction to an Anthropology of Supermodernity. Trans. John Howe. (London: Verso, 1995)

9   Recently there has been a seeming increase in the number of projects that seek immediate expansion to cities as opposed to relying on organic growth fueled by social and capital incentive. These projects are numerous, but in Cincinnati specifically "The Banks Project" involves a small designer/developer team to re-craft an entire district adjoining downtown Cincinnati.

10   Alan Berger shows the object-patterning characteristic of these types of "waste landscapes" and the affect that has on productivity. This patterning strategy demonstrates the lack of consideration for specific cultural characteristics. Drosscape: Wasting Land in Urban America. (New York: Princeton Architectural Press, 2006)

11   Colin Rowe and Fred Koetter cite examples of large scale, urban development to describe a disassociation between the modern city and the way in which people live in it. *Collage City.* (Cambridge: MIT Press, 1978)

12   Michael Sorkin describes the extent to which urban development "anticipates the physical formula of the theme park." *Variations on a Theme Park, See You in Disneyland.* (New Yok: Hill and Wang, 1992)

13   Lebbeus Woods discusses the ramifications of destruction on design. He establishes a "basis for community" on an understanding of "existential remnants of war" as they foster opportunities for new

architectural interventions. Destruction as a result of neglect over time or War is irrelevent; the same sensebility for engaging a community of place can be applied. *War and Architecture: Pamphlet Architecture 15.* (New York: Princeton Architectural Press, 1993).

14   Stan Allen writes, in reference to a theory of infrastructural design that closely relates to the exercise in generative mapping proposed here, that "infrastructure works not much to propose specific buildings on given sites, but to construct the site itself. Infrastructure prepares the ground for future building and creates the conditons for future events." *Points + Lines: Diagrams and Projects for the City.* (New York: Princeton Architectural Press, 1999)

15   Stan Allen quotes Michel Serres to open *Points and Lines.* Allen and several other authors go on to describe strategies for integrating architecture into the existing systems of the urban context in a way that "involved the renunciation of perspective in favor of other notational and cartographic systems." This logic plays a major role in the generative mapping pedagogy described in this paper. *Points + Lines: Diagrams and Projects for the City.* (New York: Princeton Architectural Press, 1999). Quote originally from Michel Serres, *The Parasite,* trans. Lawrence R. Schehr (Baltimore: Johns Hopkins University Press, 1982)

16   Camillo Sitte writes of urban planning primarily from a perspectival vantage as opposed to the systems logic being expressed in this paper. However, Sitte does address urban systems in his description of "the many natural relationships between squares and the monumental structures that framed them." In this way he framed the city as a spatial construct much the way a building is. This is a sensibility that should not be lost in this pedagogy of rational relationships. The Birth of Modern City Planning. Trans. George R. Collins and Christiane Crasemann Collins. (New York: Rizzoli International Publications, 1986)

17   Author unknown, this quote is often attributed to either Will Rogers or Mark Twain.

18   John Clubbe. *Cincinnati Observed: Architecture and History.* (Columbus: the Ohio State University Press,1992)

19   Wright, Kevin. *Downtown Cincinnati Experiences Strong Progress During Recession.* May 4, 2010. http://www.urbancincy.com/2010/05/downtown-cincinnati-experiences-strong-progress-during-recession/ (accessed May 17, 2012).

20   Aldo Rossi refers to the city as a "gigantic man-made object" in order to illustrate that a single piece of architecture is a component of the larger urban system. Additionally, Rossi refers to architecture, that has "developed in both space and time" as "urban artifacts" that act as a record of the cultural history of a place. *The Architecture of the city.* (Cambridge: The MIT Press, 1982)

21   Kevin Lynch formulates a list of criteria for analyzing and determining success of urban form "based on spatial qualities and which are measurable scales, along which different groups will prefer to achieve different positions." This set of criteria closely mirrors the methodology for "Generative Mapping" that I propose in this paper. *Good City Form.* (Cambridge: The MIT Press, 1981)

22   Christopher Alexander describes the interdependence of human behavior, urban spatial systems, and infrastructure. In a short narrative he demonstrates that activity is determined by the interdependence of "the newsrack, the newspapers on it, the money going from people's pockets to the dime slot, the people who stop at the light and read papers, traffic light, the electric impulses which make the lights change, the sidewalk which they stand on form a system – they all work together." A City is Not a Tree" *Architectural Forum* (122, no. 1, April 1965: 58-62)

23   Aldo Rossi suggests "through architecture, one can arrive at a comprehensive vision of the city and an understanding of its structure." This implies that architecture is not only a record of urban evolution, but also has the potential to be a catalyzing force for it. *The Architecture of the city.* (Cambridge: The MIT Press, 1982)