Designing Community

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DESIGNING COMMUNITY

A Thesis Presented

By

MARTHA BRYAN

Submitted to the Department of Art, Architecture and Art History of the University of Massachusetts in partial fulfillment of the requirements for the degree of

MASTER OF ARCHITECTURE

May 2009

Architecture + Design Program
Department of Art, Architecture and Art History
DESIGNING COMMUNITY

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ABSTRACT

DESIGNING COMMUNITY

MAY 2009

MARTHA BRYAN, B.A., MIDDLEBURY COLLEGE

M.A., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Skender Laurasi

It is at the interface of the virtual and the physical worlds where both the practice and the process of architecture are generated. This premise will be explored in the context of designing community- or in other words resolving apparently binary relations.

This thesis explores the spatial interaction of two autonomous but interrelated systems- for example, the interior and the exterior, the virtual and the physical, human systems and informational systems. The proposed “building” becomes the frame of these relationships. The built project is the landscape of connections shaped by its passengers- the networked individual and the incessant flow of information.

“Community” has been sentimentalized in our American culture as the suburban “neighborhood”. By contrast I see community as networked individuality, human sociability which takes place at the interface of the digital and physical worlds and therefore transcends geographical space and time. In effect, community becomes a space of distant intimacy. It is the purpose of this project to materialize this space.
Space is what is available; space holds potential. Space is the result of social relations. Spaces are relationships.
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...Strictly speaking, the ungraspable is not the obscure or the informal but that which, in
the full light of day, can be apprehended only as it is transformed...
Bernard Cache, Earth Moves

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and the process of architecture are generated. This premise will be explored in the context
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The Site: Surface Road, Boston, MA, near The Big Dig

The physical site can be defined by what bounds it or by what it bounds: on the south by Haymarket and its history; on the west by North Station; on the east by Faneuil Hall and tourism; and on the north by the North End and the Italian community culture. However, the interest of this project is to deterritorialize space, to articulate the connections rather than define the boundaries. So the site, in fact, becomes a set of relations (Figure 1).

Design Approach / Data

The project works from the premise that form can be data - generated. Analysis of the site started with mapping different site data- pedestrian circulation patterns, the incidence of pairs of pedestrians, the densities of settlement. Finally I ended in mapping two data sets: 1) the wind off of Boston Harbor – graphing the difference in wind magnitude over time; 2) the form of the human body. This generated an inventory of image curves, patterns, and visual relationships (Figures 2A, 2B).

I considered how information travels -- the network of the media, international and national news -- and how this stream of information is constantly present and moving. The visual language is a tangled but ordered network (Figures 3, 4). Strands of information form a mesh where tension at one point is felt remotely at another. There is no center.

I looked at how we similarly move through space, how we swarm and exhibit inherent self-organization (Figure 5B). This propensity to self-organize is the mechanism of the building space and provides the opportunity for designing community, for
generating new enclaves (Figure 5A). The resulting form is the internal order of its parts (Figures 6A, 6B).

The data were analyzed in Rhino software and were worked in constant relation to themselves, generating and re-generating spatial relationships. As the software user, my role as designer was to organize the information and to guide the design. My subjectivity was only a part of the networked process. Figures 7A, 7B, 7C, 8 are some design process images.

Design Concept

Bernard Cache’s concept of “inflection” described in his book *Earth Moves* is the basis of this project. A curve is a continuum of distinct points each of which displays an associated territory (Figures 9, 10). “What is said to be singular is not a given point but rather a set of points on a given curve. A point is not singular; it becomes singularized on a continuum.” (Cache: 15). The inflection point belongs to a “topography where a line is not what goes between two points, but a point is the intersection of many lines…it involves a flexible kind of continuity that is not totalized, finalized, or closed.” (Cache:x). At the “point of inflection,” for example, mathematically the concave curve becomes convex. It is at this area of “imbalance” that there is no direction, no slope to the line. Therefore anything, everything is possible. This project embodies the area of inflection -- the interface of two autonomous systems: the interior and the exterior, the virtual and the physical, the interaction of the neighborhoods (the North End, Haymarket and Faneuil Hall).

Program
The program is generated from the site condition of fragmented, intersecting areas. The site is the result of relentless circulation—of tourists, cars, media, information, history, pedestrians, etcetera. This is its condition and its opportunity. The building acts as a parasite on this urban condition and potentially intercepts the simple passage of the tourist needing to get somewhere with the opportunity for action. The people potentially activate the space by creating local news and unexpected relationships. The space empowers the passenger to meet his/her own ends. The program is for a community center which includes attractions—a news room of free information on the south, a bus station on the north, a café throughout, and a walk-in theater outside with a moveable screen weather permitting.

The space offers free access to all real-time national and international news media and houses the digital systems for recording one’s reaction to the news. Once one’s opinion is entered in digital space, one’s physical image and verbal opinion are projected throughout the space in varying scales, distortions, associations. These images create the space. The assumption is that new communities will be formed as a result of an unpredictable association of one with another. However temporary the new community might be, these relationships will make local news and influence the national media presentation here in the building space.

This is to say that the space is changeable and re-enacted with the passage of different people over time. No time in this space is the same. As the weather changes, as the flow of pedestrians changes, the landscape changes (Figure 6C).

Design Considerations / Spatial Qualities
The building (Figures 11A, 11B, 12) is a continuous paneled surface with program areas distinguished by distinct degrees of transparency or permeability. The differentiated surface creates different densities of light, different relationships between the interior/exterior. The building is an open, horizontal space without the expected interior partitions. A ramp connects people from the newsroom to the other streams of circulation. The “entrances” are spatial invitations, not conventional doors. The windows are inflected panels which open at certain places because they reflect where the curve in the overall panel can not follow the larger contour. This aberration or slippage becomes an opening. Conventional windows are not used because the inside and outside are not treated as distinct territories.

The bus station for example is modulated by the pulse of car traffic on Route 93. It is a sleek, narrow space with glass paneled walls which deflect and start to moderate the noise of the street. The form ushers pedestrians to coffee and current news information and then releases their passage as they choose.

As an area of inflection, the building is a confluence of different exposures given distinct paneling patterns which move along the surface continuum. At times the roof panel becomes the wall panel and then the floor of the ramp or the screen for news projection. The differentiated paneled space materially reflects the anticipation and concentration of movement then the release inherent in interaction and difference. A swarm gathers and disperses. The enclaves are not territorial but differentiations in a field. The building holds this potential and instigates the opportunity for something new, something not yet imagined, some invention. Then just as it is articulated, it changes.
In summary, community is incited by “attractors and detractors” (Allen, 1985), influences which choreograph human interaction. The “building” is the system of both human and virtual information and projects the continuum of information on its surface. The interior images are projected on the exterior. The human inhabitation of the space becomes the generator of the form. This co-incidence of the virtual and the physical becomes the space of the building. The community building is therefore outside of time, is not bound by physical space and is unexpected. The conventional binary association of opposites is understood as a reciprocal relationship which generates the fluid interplay of the inside with the outside and thus the form of the building (Figures 13-18).

Precedent Studies

Bernard Cache in his book, *Earth Moves: The Furnishing of Territories*, redefines the territory for architectural work in terms of his concepts of “inflection” and “framing”.

“If we can manage to erase our coordinate axis, then we will only see inflection…inflection is the true atom of form, the true object of geography. Just a hill and a valley and nothing more allow for all possible becomings. Space is thus no longer a juxtaposition of basins but a surface of variable curvature. We will no longer say that time flows, but that time varies. No settling is possible in such a landscape: variable curvature turns us into nomads.” (Cache: 41).
His furniture designs embody his concept of “variable curvatures bearing diverse singularities”. Cache’s belief in the need for invention, in the value of becoming the other, informed the process and the value of my project.

Lars Spuybroek, Principal of NOX Architecture Studio, designed the “Water Pavilion” (Rotterdam, 1997) and the D-Tower. Both projects illustrate the role of digital technology for the design process. Spuybroek says, "You can only draw with one hand, while with a computer you can work with tens of coordinated hands simultaneously". The projects incorporate media as part of the building and require the participants to activate the building space. For Spuybroek architecture “is the merging of wall and floor - object and environment, or action and form. It’s an attempt to connect one act to another. Nothing, no object or function of the design, is to remain isolated, and instead, all is brought to a continuous process of transformation”. This attitude which connects the physical and virtual in the space of a building informed my project.

Brian Massumi in his account, the “Urban Appointment: A Possible Rendez-Vu With the City”, describes a virtual appointment where two strangers are asked to show up at a certain location in the city at a certain time. Massumi describes the interaction:

“…steeped in uncertainty, the encounter was destined to remain merely a possibility. Merely a possibility? Fully a possibility. Think of what it feels like going to meet someone you have never seen before in a public space. Every person walking by might be about to step into your life. The slightest of gestures amplifies into an emergent sign of recognition. The space around is no longer a neutral frame. It is charged with anticipated gazes leading potential approaches.”

This enactment of dissolving space, of challenging the boundaries of space, or of liquefying space as Spuybroek does with the Water Pavilion, influenced my design thinking. Like Cache these examples show the potential of architecture to generate new ideas of space and to become part of the growth of our culture.
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BIBLIOGRAPHY


Amidon, Jane, Radical Landscapes, Thames and Hudson, Hong Kong, 2001.


Fujimoto, Sou, Interview, 2008


Markussen, Thomas and Thomas Birch, Transforming Digital Architecture From Virtual to Neuro: An Interview with Brian Massumi


____________, Interview with Mary Zournazi,


Novak, Marcus

Nox Architecture, Lars Spuybroek

