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Marginality and the Mainstream in Des Moines, Iowa: An Interdisciplinary Approach to Urban Design Practice and Education

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Abstract

In the spring of 2007, we taught an interdisciplinary studio at Iowa State University in which twentyfour upper level students in architecture, landscape architecture, and community and regional planning were asked to address a three hundred acre site just south of the Des Moines, Iowa central business district near the confluence of the Raccoon and Iowa Rivers. Past uses of the site have included rail yards, newspaper and magazine printing, tanning, asphalt manufacturing, paint manufacturing, coal and coke yards, foundry operations, iron works, and industrial chemical manufacturing. In 1975, industrial solvent contamination was discovered in the Des Moines water supply by the Environmental Protection Agency (EPA) and the Iowa Department of Natural Resources (IDNR); the site is adjacent to the main pumping station for the city, the Des Moines Water Works. Portions of the site were placed on the EPA's National Priority List (NPL) in 1983 when pesticide-contaminated soils were discovered during the construction of the groundwater treatment system. Remediation has included an air stripper system for treatment of contaminated groundwater and an asphalt cap for containment of contaminated soils.

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INTRODUCTION

In the spring of 2007, we taught an interdisciplinary studio at Iowa State University in which twenty-four upper level students in architecture, landscape architecture, and community and regional planning were asked to address a three hundred acre site just south of the Des Moines, Iowa central business district near the confluence of the Raccoon and Iowa Rivers. Past uses of the site have included rail yards, newspaper and magazine printing, tanning, asphalt manufacturing, paint manufacturing, coal and coke yards, foundry operations, iron works, and industrial chemical manufacturing. In 1975, industrial solvent contamination was discovered in the Des Moines water supply by the Environmental Protection Agency (EPA) and the Iowa Department of Natural Resources (IDNR); the site is adjacent to the main pumping station for the city, the Des Moines Water Works. Portions of the site were placed on the EPA's National Priority List (NPL) in 1983 when pesticide-contaminated soils were discovered during the construction of the groundwater treatment system. Remediation has included an air stripper system for treatment of contaminated groundwater and an asphalt cap for containment of contaminated soils.[1]

In addition to the obvious challenge of working on a centrally located brownfield, two aspects of the site's social configuration also intrigued and attracted us. The first was the presence throughout
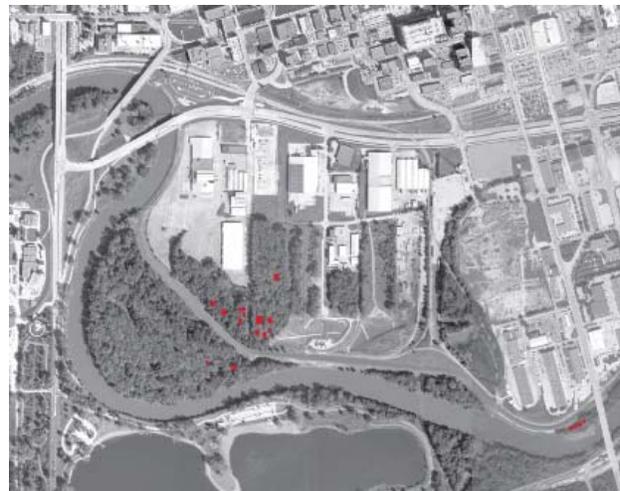
Figure 1. Existing conditions on the site – transient encampments indicated with red squares. (Source: Student elaboration on Google Earth map and spatial ethnography)

the area of small transient communities made up of tents and makeshift shelters that have transformed this urban edge into a lived space thick with social interaction (Figure 1). The second was the selection of the site by the City of Des Moines for a large residential/commercial "urban village" project that included approximately two hundred condominiums, four hundred town homes, ninety "executive" townhouses, and approximately 420,000 square feet of commercial office and retail space. This project also included a neighborhood park and

Figure 2. Proposed site development. (Source: absolutedsm.com, last update 1/16/06)

relatively undefined environmental and recreational enhancements (Figure 2).[2]

As the Des Moines Deputy City Manager specified in his city council communication 05-305, the objective of the project is to replace the brownfield with a mixed-use development "that adds significant new value to the downtown area."[3] Unsurprisingly, the transient communities were not considered in the site development proposal. A significant portion of the land area was also left undeveloped, particularly in the areas adjacent to the Raccoon River and the areas containing the capped chemical spills. We saw the "leftover" spaces and inhabitants of the site as filled with potential to enhance not only the physical conditions of the site but also the social and economic lives of its occupants. The intent of the studio was thus to connect environmentally sustainable urban design practice with issues of social equity in order to break down boundaries between building and landscape, culture and nature, and the prosperous and the downtrodden and enable people with different needs and status to live in mutual and indeed beneficial relations in the same place.

We asked our students to consider these broad questions but suggested that they also be pragmatic in their approaches. We did not, for example, ask them to resolve the problem of homelessness because to do so would not only require structural interventions well beyond the scope of the studio but also would suggest a socially deterministic approach to design that we wanted to avoid in favor of a more open-ended, systemic approach. We also did not ask the students to reject the developers' ideas for the site altogether. We instead asked them to work in interdisciplinary teams to develop new kinds of design methodologies on a variety of scales that would look at the multiplicity of conditions together and, in doing so, create places that were environmentally socially, and economically sustainable.

PLANNING AS ARTICULATORY PRAXIS

> Ben: "There've been people living here for a long time now. This is a community. Anyone is welcome here, you know...as long as they respect everyone else."

> Carlo: "I have such a hard time dealing with the system. I have a disability you know...Sometimes I think I would be better off dead."[4]

Learning to hear invisible and unfamiliar voices is critical for urban designers who believe in the progressive mission of their discipline.[5] With her concept of "articulate construction," architect Karen Bermann gave us a fertile conceptual place to begin our process of acknowledging the existence of the transient inhabitants of the Des Moines site and in particular the importance of listening to their voices. Bermann, who works on marginal situations ranging from retirement homes in Iowa to Gypsy camps in Italy, argues that an empowering architecture articulates speech and listening and when we do so we lay the foundations for "empathy and for resistance to abuses of power."[6] Building on Bermann, we argue that a sustainable planning and design practice uses design to articulate voice.

During the first part of the studio, we asked the students to document and analyze the past and current conditions of the site including environmental, land use, and inhabitation patterns so as to develop an understanding of the various "voices" of the site. As part of this work, some of the students engaged with the transient community so as to understand their lives and histories but most of all to learn how to listen to their voices. Prior to this work, few of the students had ever worked with transient communities or were even aware of the presence of homeless shelters in the nearby downtown area. As the studio went on and students became familiar with the different communities, it became obvious that the process of discovery worked both ways; more than one person living on the site said

to us that we were the first people, apart from the police, who had visited them in their homes. It also became clear that, despite the apparent temporary nature of the shelters and even the presence of any given individual, this community had occupied this area for a considerable period of time and had a structure that allowed for the independence of its individual members within a loose but nevertheless solid support system.

Laclau and Mouffe's definition of articulation gave us further conceptual grounding for this project. In *Hegemony and Socialist Strategy*, they define articulation as "any practice establishing a relation among elements such that their identity is modified as a result of the articulatory practice."[7] We borrowed this definition but relocated it from the domain of discourse to that of space, thus prioritizing the relationships between spatial elements and the systems constituting these relationships over the elements themselves. Such an operation allows us to conceptualize articulation as the process of re-thinking (i.e. re-articulating): a) the spatial relations between mutually exclusive social identities, in our case that of the transient community, and that of the future homeowners, and b) traditional urban design and planning practices that attempt to deal with factors that identify an urban landscape on a logistical level, like urban blight, without much consideration for the underlying social, cultural, economic, and political causes of the situation.[8] In particular we felt that traditional design and planning approaches tend to exclude the complex interrelationships between causes and effects and do not provide solutions that can be sustained over time. They furthermore do not address the political power relationships present in the existing system and thus serve to perpetuate them.

The development proposed for the site (Figure 2) illustrates a number of the gaps between traditional urban design practice and the realities of contemporary urban situations. As a result of the recent surge in sub-prime mortgages, the rates of suburban growth at Des Moines' western and northern edges are among the fastest in the nation, leaving the capital city at pains to attract new residents. Systematized freeway access; building projects including hotels, sports arenas, and a "design star" public library; and a plethora of "urban loft" housing are just some of the strategies that the city has undertaken to revitalize the downtown

area. The Riverpoint West project likewise attempts to bring new residents to the downtown area but the strategy employed creates a condition similar to the suburban developments that abound on the city's periphery. From an architectural point of view, the project is self-referential and a-contextual and, as such, could be located anywhere. At a social level, the site is treated as a *tabula rasa* without either occupants or history. Environmentally, the existing floodplain location and toxic contamination are ignored. In sum: the new urban living that the project promotes is in fact directly derived from the repressive and unsustainable socio-spatial policies of both urban renewal and suburban sprawl.

We did not, however, simply reject the existing site design and ask our students to create a completely new masterplan for the entire area. Rather, we asked them to include the proposed development in their strategies and to intervene in it in ways that would break down the boundaries between new and existing, formal and informal, center and margin. This strategy moved the students away from their usual idea that urban designers are in control of all factors and brought influences like the real estate market and the urban tax base into play in their work. It furthermore prevented them from maintaining the duality between market buyers and homeless, for example, by asking them to value both parties rather than hierarchically ranking one over the other.

In doing this, we asked the students to move beyond an epistemology based on complete control and outcome prediction and move toward a more open-ended re-articulation of existing socio-spatial relations that does not assume pre-determined results. This is in part because socio-spatial identities are intrinsically defined according to class, race, and gender which, as Hall points out, are not fixed but fluid, incomplete and subject to change.[9] Envisioning a new relation between transient and non-transient communities from a systemic perspective is therefore an open process the boundaries of which are not fixed but subject to negotiation. This approach furthermore shifts the mechanism of design articulation away from fixed built form in favor of open-ended landscape and infrastructural systems that can be modified over time to accommodate socio-economic and environmental changes.

In one project, the students created a linear infrastructural system using abandoned shipping containers. The sequence of containers was thought of as a spine functioning as a social condenser made of a variety of places for multiple publics ranging from residences for transients, artists, and students to repair shops, studios and small eateries. Based on a frame-infill system similar to that of MVRDV's Container City, the containers allowed for a variety of social and spatial configurations. Unlike Container City, however, the linear arrangement did not create a closed "city" but rather allowed for open interaction and interconnection with adjacent built and landscape conditions.[10]

In addition to creating physical spaces for inhabitation and gathering, the container system also acted as a catalyst in creating a new kind of economic system designed to weave together the disparate site populations. Several containers on the ground level, for example, could be used as workshops run by homeless residents with practical skills such as auto and bicycle repair. Residents of the housing development would thus have easily accessible services nearby that would in turn provide income for the service providers. Other containers could be used to create recycling centers where both homeless and development residents could both bring and acquire materials, generating a system of exchange between different economic levels while simultaneously creating a common connection to resource conservation (Figure 3).

Figure 3. Vignette of recycling center run by transient residents adjacent to stormwater berm-swale system with recreation trails. (Source: Student drawing by Nathan Martin)

MARGINS AS PLACES OF OPPORTUNITY

Many years ago in *The Image of the City*, Kevin Lynch called attention to what he called "lost areas," urban places considered unworthy of attention. After spending some time in these places and talking to the people that inhabited them, Lynch "discovered" that these lost areas were not lost after all and did not merit their reputations. In fact, they seemed lost only to the occasional and hurried traveler who traversed them by car. For the people who lived there, these were places full of challenges but also opportunities.[11] Jane Jacobs also legitimized the "minor" spaces within urban landscapes by describing the "fire of use and vitality" that structures and gives them particular flavors and identities. Very important for the pedagogic approach of our studio was her argument that it is the variety of social relations and the multiple, creative use of space, beyond aesthetics, that make minor spaces attractive, efficient, and different from all other spaces.[12]

By adding race and class considerations to this discussion, cultural critic bell hooks re-conceptualizes these so-called minor spaces or margins from a more overtly political point-of-view. According to hooks, margins become not simply locations of despair but, because they are distant from the centers of power, also places from which to start new, enlightened, cultural politics and, we add, a progressive design and planning practice.[13] Urban design as an articulatory practice is thus ideologically located within the cultural artifacts and spatial practices of the people living at the margin whose voices can be heard and transformations achieved through negotiation as well as resistance.

Several student projects addressed the possibilities embedded within the social conditions of the margin. A particularly interesting idea envisioned a progressive notion of an "ethical" economy. The students acknowledged that if articulation has a chance to work, the relationship between the transient community and the residents cannot be based solely on monetary exchange. In fact, they envisioned an exchange system based on barter and reciprocity. The designs for the physical environment do not attempt to specifically generate the exact practices of this economy but rather set up frameworks within which a variety of interactions can take place. They are also open enough to ac-

commodate not only shifts in the physical environment resulting from weather and seasonal changes but also shifts in the socio-economic environment. The role of the designer has thus moved from being a creator of form that determines social function to a strategist who creates a framework open to a variety of possible futures.

Considering the urban landscape as a dynamic, complex environment furthers the utility of thinking of the margin as a place of radical opportunities. In this context dynamism means that physical and cultural forces are intermixed and in turn generate new connections that change over time. This attitude draws on both traditional ecological planning ideas that emphasize the interrelationship between the physical, biological, and social "layers" of a site[14] and more recent landscape urbanism ideas about the city as a continuum that incorporates both the "natural" and "human-made" into a system that embraces constant temporal and spatial change.[15] Several of the projects in our studio exposed systems usually hidden from view as a way of creating both awareness of and spaces for dynamic interaction. In one project, the movement of stormwater runoff

remove toxins from the water, finally returning any remaining water to the Raccoon River system.

Another student project addressed this issue by creating a system based on phytoremediation, urban agriculture, and stormwater management as a basis for interweaving the populations and landscapes of the site together (Figure 5). In addition to making visible the typically invisible stormwater system within the housing development by running water through open channels and irrigation strips, they also moved this water through a sequence of vegetated areas. The first third of these areas contained plants that could extract toxins from the water and these areas were also connected to the river system in the event of flooding. The rest of the open areas of the site were planted with various crops in a progression from more to less tended as they move away from the built areas. These areas were designed to be managed by interested people in both the transient and development communities and a central market area provided a social hub for the selling of local produce, community gatherings, and a gateway to a system of recreational trails.

Figure 4. Section of student project showing proposed movement of stormwater in urban areas. (Source: Drawing by students Aaron Long, Drew Maifeld, Shelley Vrchota)

from rooftops to river was made visible (Figure 4). All downspouts within the housing development visibly emptied into open water channels that in turn ran into vegetated strips within the road network and provided irrigation. These in turn led to "eco-cells" at the perimeter of the built area that acted as gateways to the perimeter river system. These cells were wetland areas where the rise and fall of water level would be clearly visible. They also contained recreational functions and were interconnected by a system of recreational trails. In addition, the stormwater system moved water from one cell to another with each planted differently to
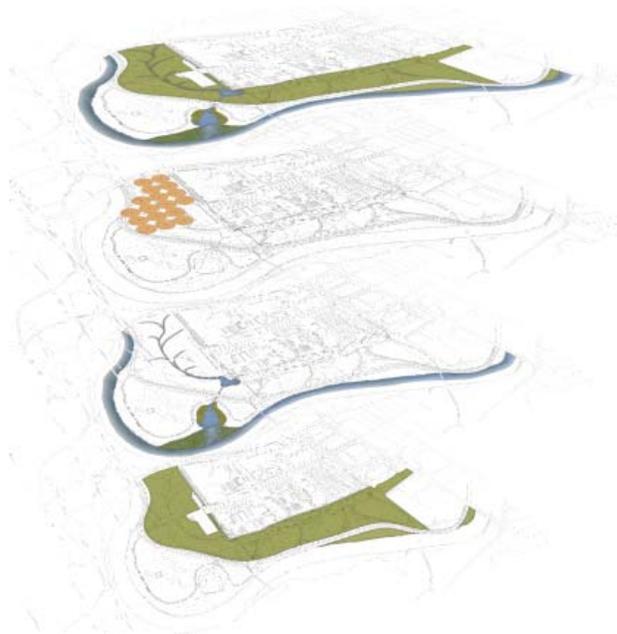

Figure 5: Layered plan of student project showing phytoremediation and stormwater treatment. (Source: Drawing by students Jordan Below, Justin Harvey, and Joe Kirk)

CONCLUSIONS

The concept of re-articulation allows designers to operate within an open and flexible approach that renders boundaries permeable and allows interaction between traditionally opposed groups, systems, and land uses. When we elaborate on this concept from an appreciation of the margin as a place of possibilities rather than simply despair, we create a design practice that can accommodate diversity, value local and regional environmental systems, and accept physical and social change over time.

Such an approach nevertheless challenges both students and teachers, particularly in an interdisciplinary setting. The projects created in this studio demonstrate how landscape architecture, architecture, and planning can be defined in terms of disciplinary differences but also in terms of practical interconnections, juxtapositions, and "reciprocal interferences."[16] Notwithstanding, acknowledging interdependencies is difficult because it not only requires making lateral connections between seemingly disparate domains of knowledge but, more importantly, it presupposed a reflexive turn within the professions and academia that recognizes the points of contact, not the opposition, between categories such as public and private and center and margin, with the latter understood as the generator of urban standards.[17] As Teddy Cruz very eloquently points out in discussing the ineffectual and artificial separation between city center and suburbs, designers "explore the practice of the real" away from simply stylistic considerations and more toward an "operative process by which self-organizing, hybrid, and complex systems become the referents for a more inclusive and open-ended project."[18] Of course, the realistic possibilities of such an approach to make "*tendenza,*" that is, to actually change the status quo, will depend less on the probability to actually bring groups of different socio-economic status together or on actually convincing practitioners to become advocates for under-represented interests. In fact it will depend on whether these very professionals and academics will use design politically to challenge the modus operandi of those institutions that actually contribute to shaping the political economy of urban development.[19] This is itself in an open-ended question.

From a strictly pedagogical perspective, the intentional open-endedness of the studio proved to be a tremendous challenge for many of our students. The multi-disciplinary composition of groups emphasized this problem: some students were used to making decisions based on a supposedly complete, fixed base of information and clearly articulated goals. Other students were better able to work with incompleteness or at least cope with incomplete information when necessary. Some were accustomed to treating information as a neutral commodity to be collected and accepted. Others were more familiar with the idea of analyzing both information and its sources in order to draw conclusions. As an upper level studio, we did not give our students programs and goals but rather asked them to develop these for themselves. In other words, they were asked to proactively determine what the issues were on the site and define their solutions accordingly rather than reacting to a given brief.

If on the one hand the reaction of students toward incompleteness of information manifests the different approaches to knowledge and action among their faculty, on the other it poses serious questions when students work in interdisciplinary settings. We realized that the open-endedness of our approach challenged students differently: intellectually, because architecture, landscape architecture, and urban planning have different ways of conceptualizing and analyzing the nature and contradictions of contemporary urbanism; practically, because each discipline uses different tools to intervene in that reality (i.e. design, policy, or a mix of the two). These differences become assets when students are able to transfer their disciplinary knowledge and learn from each other. When this exchange is not as developed, working with students from multiple disciplines can become conceptually confusing and a source of frustration for both students and teachers.

To address these issues, we were constantly shifting our identities between being educators who challenged students to rethink the whole theory-praxis nexus of design, and being trainers teaching how to incorporate economic, social, and environmental analyses into a design as well as how to generate forms and systems from ideas generated by these analyses. We also had to frequently act as "communications coaches," teaching students how to work in teams and use language that every-

one could understand regardless of their individual specialty. In doing these things, we encountered in teaching the very difficulties that systemic articulation, as a concept and a practice, encounters in contemporary mainstream design practice. The interdisciplinary design studio was thus able to serve as a model of the much larger issues of diversity, multiplicity of goals and methods, conflicting approaches to environmental and social sustainability, and so on that face the design professions and the academy in the twenty-first century.

ENDNOTES

1. See http://www.iowadnr.com/land/consites/hwregistry/sitesummaries/dico1.pdf. Last accessed September 2008.

2. See "Local Government Support Federal Law for Brownfields Cleanup and Redevelopment. Presented by Preston A. Daniels, Mayor of the des Moines, Iowa,on behalf of the: Natioanl Association of Local government Environmental Professionals "NAGELP". Senate Subcommittee on Environment and Public Works, Subcommittee on Superfund, Waste Contron and Risk Assessment, June 29, 2000. " Available at http://epw.senate.gov/107th/dan_0629.htm. Accessed September 2008.

3. The developer of the project is Riverpoint West, LLC, a consortium comprised of Sherman Associates from Minneaoplis, MN and Rottlund Company from Roseville, MN. The owners of the site are Hubbell Realty Company and Hubbell Terminal Corporation which owns parts of the site previously occupied by Pittsburgh-Des Moines Steel.

4. Quotes from transient site residents gathered by student Drew Maifield during January-February, 2007.

5. Leonie Sandercock, ed., *Making the Invisible Visible: A Multicultural Planning History* (Berkeley: University of California Press, 1998), 1-36.

6. Karen Bermann, "Love and Space in the Nursing Home," *Theoretical Medicine* 24, 511-523.

7. Ernesto Laclau and Chantal Mouffe, *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics* (London: Verso, 2001), 105.

8. Mindy Thompson Fullilove, *Root Shock: How Tearing Up City Neighborhoods Hurts America and What We Can Do About It* (New York: One World/Ballantine Books, 2004).

9. Stuart Hall, ed., *Representation: Cultural Representations and Signifying Practices* (Thousand Oaks, CA: Sage Publications with the Open University, 1997), 1-13 and 14-76.

10. See, for example, http://www.mvrdv.nl/_v2/projects/172_containercity/index.html. Accessed September 2008.

11. Kevin Lynch, *The Image of the City* (Cambridge, MA: The MIT Press, 1960).

12. Jane Jacobs, *The Death and Life of Great American Cities* (New York: Random House, 1961).

13. bell hooks, *Yearning: race, gender, and cultural politics* (Boston: South End Press, 1990).

14. Ian McHarg, *Design with Nature* (Garden City, NY: The Natural History Press, 1969).

15. James Corner, "Terra Fluxus" in Charles Waldheim, ed., *The Landscape Urbanism Reader* (New York: Princeton Architectural Press, 2006), 23-33.

16. Cino Zucchi, "Enclaves: Cruising the City of Minorities" in Ghent Urban Studies Team, ed., *The Urban Condition: Space, Community and Self in the Contemporary Metropolis* (Rotterdam: 010 Publishers, 1999), 228-235.

17. Maarten Hajer and Arnold Reijndorp, *In Search of the New Public Domain* (Rotterdam: NAi Publishers, 2002).

18. Teddy Cruz, "Border Postcards: Chronicles from the Edge," James Stirling Memorial Lectures on the City, Canadian Centre for Architecture and London School of Economics with The Van Alen Institute, New York, NY, April 7, 2005. Lecture transcript available at http://www.cca.qc.ca/documents/Cruz_Stirling_Lecture.pdf.

19. Ibid., 14.