

# UNSTAKED TERRITORY: Frontiers of Beginning Design

Proceedings of the 19th National Conference on the Beginning  
Design Student, Oklahoma State University, Stillwater, Oklahoma  
April 3-5, 2003



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Challenging The Boundaries I  
Challenging The Boundaries II  
Integrating The Boundaries  
Obscuring The Boundaries  
Various Terrains  
Initial Terrain

*Offered through the Research  
Office for Novice Design  
Education, LSU, College of Art  
and Design, School of  
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Published by Oklahoma State University,  
College of Engineering, Architecture and Technology  
512 Engineering North  
Stillwater, OK 74078  
405-744-5714  
f: 405-744-5369

ISBN 0-9746642-0-0

## Borderlands: A Place Apart - Human Settlement in a Divided Landscape

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### **Introduction:**

The 2,000-mile line dividing the U.S. from Mexico and its extension along the Gulf Coast dividing the U.S. from Cuba exists as a three-dimensional line thickened by discordant uses, anarchic forms, displaced places, and segregated inhabitation. The turbulent history of the borderlands is riddled with misconceptions, fantasies, and tragedies. People coalesce here and then disperse in an effort to fulfill the destiny of their desires and to attain the mythological better life in the United States. Their original point of departure and the magnitude of their want often determine their levels of fulfillment.

This interdisciplinary design studio, *Borderlands*, seeks to identify, define, and graphically represent the structure and form of the borderlands region. A series of graphic explorations and verbal arguments are being developed discussing the relationship between landscape, urban form, interiority, architecture and the political, social and cultural transactions that occur within the built environment of the borderlands. Analysis of the existing built environment's relationship to the landscape provides a critical view of how the borderland was shaped culturally, socially, and politically. This base knowledge of cultural inhabitations and geographic adaptations promotes informed decisions regarding appropriateness of proposals and interventions in the future growth and development of the borderlands.

The significance of this project lies within the weaving together of a contested edge – the border. It articulates how to look at a geographical region that is bifurcated by a politically sharp boundary. The research conducted here begins to address human needs across an intense line of difference. The question is not so much how do you find dignity in human settlement, but rather - how do you find human dignity in inscribed difference across this thickened borderline? The borderlands are an extreme example of denied ecology, a complete defiance of nature. Typically the health of indigenous communities – plants, wildlife, humans – is dependent on adaptation to the physical landscape. Along the US-Mexico border the shift is away from dependence on the ecology of nature to dependence on the ecology of power. The purpose of this studio is to determine whether physical design is capable of ameliorating this contested zone of denied ecology.

### **Format**

This paper discusses the teaching pedagogy involved in interdisciplinary and collaborative study – both the rewards and the difficulties inherent in it. It also discusses the choice of studio project appropriate for this type of collaboration and the potentials within it. This particular studio is currently underway this spring and the final conclusions have yet to be drawn.

Organized as an interdisciplinary and collaborative workplace, the *Borderlands Studio* is comprised of students and faculty from three design disciplines: architecture (fourth year undergraduate), landscape architecture

(second year graduate), and interior architecture (fourth year undergraduate). Keeping with proven interdisciplinary format, it is a problem-based studio that requires students to engage one another in the search for solutions. It is the first interdisciplinary and fully collaborative studio offered in the curriculum. The students are divided into teams of three, one from each discipline, and work together throughout the semester on three project scopes – urban public space, transportation/border crossing facility, and a “Center for the Americas.” Each project scope requires all three students to consider a multiplicity of scales and concerns that often fall outside of their particular focus. The studio includes research through travel and library/studio research. Students spend one week in Havana and one week traveling along the U.S.- Mexico border.

### **Interdisciplinary learning**

Central to interdisciplinary learning is the desire to tackle a problem or set of problems that are too extensive to confine to one design discipline and which require a broader approach in order to be effective. Professor William Newell of Miami University in a 1992 study on interdisciplinary learning explains this necessity, “(it is a) process of answering a question, solving a problem or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline or profession.” (Newell, 2001, p.202) The borderland condition became an ideal site for the studio because it necessitated multiple viewpoints to adequately begin to address it. Existing as a complex condition, the borderland lends itself to studying the potential ability of design to suggest solutions at varying scales and across disciplines. The site amplifies the already blurred boundaries between landscape architecture, architecture, and interior architecture asking students to negotiate personal positions and ideologies into a synthesized solution. Students are forced to view the ecological, physical, cultural, and social ramifications of the border through the lens of the macro-scale environment to the immediate scale of individuals with conflicting spatial needs.

Selecting the borderland as site for the studio problem allows the boundaries of the various disciplines to periodically collapse permitting students to gain insights into the disciplines of their group members. This “change of perspective” is critical to successful interdisciplinary learning as Professor Newell explains:

“If students are to develop a feel for a discipline’s perspective, they must learn to think like a practitioner of that discipline. Members of a discipline are not so much characterized by the conclusions they arrive at, but by the way they approach the topic, the questions they ask, the concepts that come to mind and the theories behind them. Without some sense of these, we offer students dogma rather than empowerment, training rather than education.” (Newell, 1992, p.216)

In order to successfully facilitate interdisciplinary learning the question becomes - how much disciplinary knowledge is necessary prior to a studio such as the *Borderland Studio*? Recently, the national trend - typically in non-design programs - has been to move toward little or no pre-requisite disciplinary

knowledge. This model has been common in design programs as well where the first year is often spent in a mixed-discipline studio. Depending on the level of sophistication of the students and the complexity of the design problem, interdisciplinary learning can be very effective for first-year students especially in breaking down preconceptions surrounding each discipline at the onset of design education. However, for a problem-based investigation with the complexity of the borderlands, a greater degree of discipline based knowledge has been critical to the relative success of the various proposed design solutions. In particular, a student with a certain degree of expertise contributes to the group structure the needed disciplinary perspective required for effective dialogue. Introduction of interdisciplinary studios into the curriculum at the 4<sup>th</sup> year undergraduate and second year landscape architecture graduate levels is an appropriate time to offer the multi-discipline approach as the students have already developed a strong sense of their personal and discipline specific “perspectives.” Newell further elaborates on the process that leads to a more multidisciplinary approach:

“Interdisciplinary courses are more than the pieces of disciplines from which they are constructed. They extract the world view or perspective embedded in each of those pieces, comparing them and ferreting out their underlying assumptions when they conflict and then integrating or synthesizing them into a broader, more holistic perspective. Through the identification of the assumptions and values of competing perspectives, including those they find most appealing, students are encouraged to recognize and formulate a critique of their own irrationally held beliefs and biases” (Newell, 1992, p.220)

Likewise, the Auburn faculty team encourages the groups to actively discuss the varying methods of approach and the differences in conceptual questioning across disciplines, while analyzing places of common ground brought forth by the nature of the site. Of particular significance is the degree to which the dialogue between students of the various groups leads to a sense of ownership of ideas and increased interest in uncovering viable solutions. The politically charged condition of the border coupled with its physical disarray has led to impassioned discussions of the validity of ingrained assumptions, forms and institutions as evidenced by students often modifying beliefs that had gone previously untested. These personal revelations have consequences in the design strategies, with some student groups challenging the more pragmatic solutions by opting for clearly polemical solutions that push common assumptions of appropriate physical form.

### **Collaborative Learning**

The second critical aspect of the *Borderland Studio* is the emphasis on collaborative learning. Collaborative learning in the university classroom is antithetical to traditional teaching structures. Learning has been developed as a typically solitary endeavor, one based on competition and individual performance. In the collaborative model this is flipped. Here students rely on one another to investigate and complete assigned work. The significance of collaborative learning stems from situating the “student as co-learner with fellow students and faculty” requiring students to be “active constructors of their

education, not merely receptacles for faculty-provided knowledge or as mere synthesizers of received information...faculty and students alike [are] full and equal partners in the construction of meaning.” (Smith & McCann, 2001, p.112)

Collaborative learning in the design studio is a challenge. With experimentation, however, effective group dynamics may occur and may lead to positive outcomes with unexpected results. The *Borderland Studio* structure and assignments have undergone a series of revisions by faculty during the semester in an attempt to uncover a successful team structure. Initial groupings of three students working on three moderately connected programs produced a decidedly mixed result. Reformulation of the teams into five groups of nine students created an effective group dynamic that allowed the previously stymied teams to flourish due to the addition of more perspectives to the discussion. Subsequently, these large groups have been redistributed into the smaller teams of three with one studio session per week set aside for meetings of the larger nine-member groups for critique and discussion. In addition to finding an appropriate group strategy, the design problem was formulated in manner that intricately linked the programs and that forced the students to maintain a dialogue with team members. The results to date have been far more successful with the new group structure.

The two pedagogical methods, collaboration and interdisciplinary study, have complemented one another well where, “collaborative learning is an integrative pedagogy analogous to interdisciplinary study that is distinguished by its reliance on perspectives contributed by students instead of disciplines.” (Newell, 2001, p.204)

### **Studio content**

Translating the precepts of interdisciplinary learning and collaborative learning into the studio and into a specific design project has been a process of evolution. The studio has evolved into three distinct phases: the Havana project in teams of three, the urban form study as it relates to the US-Mexico border in teams of nine, and the currently unfolding investigation of urban public space and city form, border crossing/transportation network, and “Center for the Americas” again in teams of three. Each stage has been a learning experience for both students and faculty. We all have come together on the importance of communication, discussion and consensus.

Beginning with the trip to Cuba in early January and the subsequent studio work resulting from that trip the faculty, realized that we had not clearly anticipated the pitfalls of an inadequate problem statement. The assignment consisted of three program types that allowed the students to work individually with minimal dialogue. Any sense of collaboration was for the most part negated as each student retreated to the known studio working method of individual exploration and design development. The proposed solutions ended up being thinly conceived, reliant primarily on formal explorations that omitted the social, cultural and political aspects of Cuba and border conditions.

Recognizing the misstep, stage two was reformatted to include the large groups that explored specific topics related to the US-Mexico border. Following a ten day “road trip” field trip that consisted of driving 2,000 miles along the border, the students returned to studio to begin an in-depth exploration into one of five

urban forms in relation to the border conditions witnessed during field study: *linear city*, *ecological city*, *concentric city*, *ordered city* and *organic city*. Initially the students balked at the idea of working in such large groups, as many had had only negative experiences of teamwork. However, as the complex and often distressing issues present along the border began to be discussed, the students became engaged in a manner that no one had truly anticipated. As a consequence, the urban proposals began to take on a polemical nature that allowed the students to question their many preconceptions and assumptions. Social and political consciousness moved to the forefront, offsetting formal design moves. Eventually, each group of nine proposed a city that took a distinct ideological stance. Some, such as the *linear city* and the *ordered city* manipulated existing urban fabric while others selected uninhabited sites for their proposals. Each team developed a series of large-scale two-dimensional graphic and three-dimensional model explorations that examined the relationship between the designated urban form, the selected site and their ideological stance. In addition, each group was asked to prepare a written statement of their position. These conceptual premises serve as the basis for judging the success of the projects. Excerpts from the statements of the *concentric city*, *ordered city*, and *linear city* teams follow:

The *concentric city* team proposed a idealized city which circumvents the conditions imposed by the physical boundary of the border by blurring it through altering the inhabitants' perceptions of the space:

"The border is ambiguous. Entry into the town is through a series of tunnels designed to disorient the individual from knowing which side of the border they are in. This is strengthened by the fact that the Mexican part is actually north of the American part. Normally one looks south across the river into Mexico. Here one would actually look south into America. An east-west diagonal will cross the border multiple times opening the flow of people, goods, and knowledge. Thus, equality is the rule and division the exception. No one knows exactly where the border is, nor do they care. Instead this city will act as one owing its loyalty to the common land and to the people." (Studio X student team, 2003)

The *ordered city* is located on the US-Mexico border at the existing cities of Calexico/Mexicali. The group proposed a futuristic design solution incorporating a new approach to infrastructure as well as a proposed architecture of verticality. These core precepts anticipate growth, aiming for self sustainability of the city:

"A ½ mile strip of rezoned land will follow the present border, defining the new city. Instead of clearing the present cities' infrastructure to create a new city, it will be expected to grow and evolve on its own under its new designation. While a population limit will not be set, the city boundaries will be. Growth will eventually occur vertically instead of sprawling horizontally. The city will be progressive with mass transit, dual citizenship, and a duty-free economy. The evolution of the city represents a progressive and optimistic view of architecture and modern urbanism." (Studio X student team, 2003)

The *linear city* sought to eradicate the border by expanding the zone or threshold of the border into an occupiable and economically viable city by proposing a blending together of both sides of the currently bifurcated land and cultural conditions:

“(by tearing) down the wall that divides. In doing so, cities that are located adjacent to one another along the border will become cities of dual citizenship, part of both Mexico and the US. These cities have already become huge nodes of trade between North and South America, due to their extensive transportation links. By tearing down the wall it will help these cities become more efficient and productive. Communities will be built to act as sutures, to stitch the two sides back together as one. These neighborhoods will occupy the space that was once the wall and will begin to weave the two sides together mending years of separation. As a society we have a choice, we can continue to spend billions [of dollars] to create the “Great Wall of America” or we can invest billions [of dollars] in the dignity and quality of life of all North Americans.” (Studio X student team, 2003)

The third stage of the studio consists of breaking back down into the smaller groups of three to work on three interrelated design programs – the urban public space and city form, the border crossing/transportation network and the “Center for the Americas.” One day a week the entire group of nine comes together to discuss and critique the work of the smaller groups. It has become apparent, however, that several of the groups continue to work routinely as a larger team bouncing ideas of one another on a daily basis. The overall atmosphere is spirited but congenial, with students actively working together to develop and push their ideas on numerous levels including political and social as well as spatial construction.

### **Conclusion**

In conclusion, this *Borderland Studio* is the first attempt in the curriculum at working collaboratively on a complex idea based problem. The intention to have students work collaboratively on an interdisciplinary project has produced some revolutions in their thinking and has strengthened their critical reasoning skills as evidenced by their mid-semester course feedback. By assigning an issue-loaded project that requires a multi-faceted approach each student has been faced with the intense negotiation process inherent in any group situation. The overall success of the studio is still to be decided, but the responses to date have been positive.

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