

Changing Landscapes-Changing Identities: Studying and Teaching the Cultural Evolutions of the Deltaic and Chenier Plains

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THE CURRENT CONDITION

If water truly is the fundamental element for sustaining life, the wetlandscapes of the Chenier and the Deltaic Plains that were created by the hydraulic flow of the Mississippi River and span from southeast Texas across southern Louisiana are undoubtedly one of the liveliest places on earth. Not only do these wetlandscapes host an abundance of wildlife and fisheries as well as generations of human cultural evolution, but the actual geographical wetlandscapes are also alive in a constant dynamic morphology. This dynamic geological landscape has served as the armature upon which several cultures have evolved upon for centuries. It is arguable that the more dynamic a landscape, the more rapid a culture (or species) will be forced to evolve. This being the case, perhaps if Darwin were able to access the evolution of the cultures that inhabit the Chenier and Deltaic Plains, he would be no less amazed by its uniqueness than he was by the animals of Galápagos.

In addition to the natural forces that act on this particular wetlandscape (essentially the watershed of the Mississippi River which ranges from Montana to New York and reaches as far north as Alberta, Canada) man has intervened on the same scale with an infrastructure of levees and hydraulic control structures in an attempt to control, or at least regulate, nature. The impetus for this massive undertaking (which has been going on for over two centuries) has always been fueled by a global economic pressure – first cotton, then oil. These man-

made interventions have exacerbated the dynamic qualities of the Deltaic and Chenier Plains.

The current condition of this wetlandscape is in crisis. The devastating hurricanes Katrina, Rita, and Ike, the BP oil spill, and last summer's flooding (2011) has brought international attention to the complete imbalances of the dynamic qualities of the Deltaic and Chenier Plains. As professors and architects, we celebrate the wide range of roles that architects can play, from regional planning to building sciences, in solving the problems that arise due to these imbalances. Simultaneously, we are suspicious that many of the current design issues arise from architects' (and engineers', and landscape architects', and politicians', etc) obsession with problem solving, and a shortcoming of a sustained, intensive, non-pragmatic, problem understanding.

While it is certain that the role of architects in the gulf coast area as designers of buildings (objects) has undeniably expanded since the recent incidences mentioned above, the role of architects in designing (or redesigning) the systems in which we live, and that ultimately shape our identities, remains virtually non-existent. In an attempt to extend architecture into these concerns, we are educating our students (as well as ourselves and the public) that we must first expand our understanding of the problems at hand. We are attempting to do this through an exploratory course that focuses specifically on a more complete understanding of the myriad of overlapping systems which surrounding us.

WHAT IS STUDIÉAUX

studiÉAUX (pronounced studio) is an experimental course that was founded four years ago in an attempt to introduce architecture students to the interrelationships between the geologies, cultures, and infrastructures that exist within the wetlandscapes of the Deltaic and Chenier Plains. Using an immersive methodology of teaching, the course research focuses on the changing cultures that inhabit these changing wetlandscapes, the global economic pressures that have enabled massive infrastructural development on these landscapes, and the ecological and geological changes that are becoming evident in the wetlandscapes of southeast Louisiana.

"Art requires a delicate adjustment of outer and inner worlds in such a way that, without changing their nature, they can be seen through each other. To know oneself is to know one's region. It is also to know the world, and it is also, paradoxically, a form of exile from that world." Flannery O'Connor

Southern Louisiana was built by the Mississippi River. Over the past several millennia, the Mississippi Delta and its sediment have swayed as far to the west as Texas and as far to the east as its current location. Each time its delta has reestablished itself in a new location a rich and fertile landscape remains in its former place. Since the Mississippi Delta's last relocation almost 1000 years ago "a nation [has] developed" ("The Control of Nature," McPhee, pg. 6) and a combination of distinctive cultures and flourishing economies have evolved upon its varied remains. This area of ancient deltas form a triangle in southern Louisiana. Its base is almost 300 miles wide and spreads along the coast from the border of Texas and Louisiana in the west to the Mississippi's current delta location in the east. The apex of this triangle is approximately 50 miles northwest of Baton Rouge where the Atchafalaya River begins as a tributary of the Mississippi. The western half of this triangle is geologically comprised of the Chenier Plain and the eastern half is generally comprised of the Deltaic Plain. Culturally, the entire triangle is known as Acadiana, the land of the Cajuns.

Over two hundred years ago, the exiled Acadians of Canada began settling this area. Its low-lying, sometimes wet and sometimes dry, lands were previously considered to be uninhabitable. Since this settlement movement began, innovation of housing and landscape infrastructure was

paramount to survival and has largely continued to evolve ever since. Levees were created, canals were dug, water control structures were built, and houses were elevated. Originating as devices for flood control and agriculture production for the local region, these infrastructural interventions grew exponentially in scale during the last century with the discovery of oil and gas below the surface. Creating access by both land and sea, to this wetlandscape that was once considered a wasteland, was now financed by a global petro-chemical industry. As the industry's need for greater flood protection was realized, the innovative architecture which accommodated nature's ways gave way to a more homogeneous building typology, and areas that were formally thought of as unbuildable due to hurricanes and flooding became new slab-slab-on-grade communities which largely supported the oil and gas industry.

Since the events of Hurricanes Katrina, Rita, and Ike that brought to light the consequences of failed infrastructure and diminishing wetlands, the cultures that have chosen to remain on this landscape have reestablished the innovative and pioneering spirit of past generations by creating a new phase of evolution in both lifestyle and architecture. It is from this mark in our cultural evolution that studiÉAUX begins. We ask questions about the current *actual* conditions of the local geography, infrastructure, and culture. studiÉAUX contemplates the past and imagines the future, but at its core, it is about experiencing the present in an immersive learning environment.

As a three credit elective course in a professional architecture curriculum, the most experimental aspect of studiÉAUX may be that it looks outside standard professional education in order to gain unique vantage. Although the subject is always the role of architecture, studiÉAUX explores the multiple connections and multiple scales regarding site: literature, geography, ecology, geology, culture, and art. These explorations focus specifically on a more complete understanding of the environment, *'the most important material from which to develop the (architectural) project'*

"Geography is the description of how the signs of history have become forms, therefore the architectural project is charged with the task of revealing the essence of the geo-environmental context through the transformation of form. The environment is therefore not a system in which to dissolve architecture. On the contrary, it is the

most important material from which to develop the project." Vittorio Gregotti

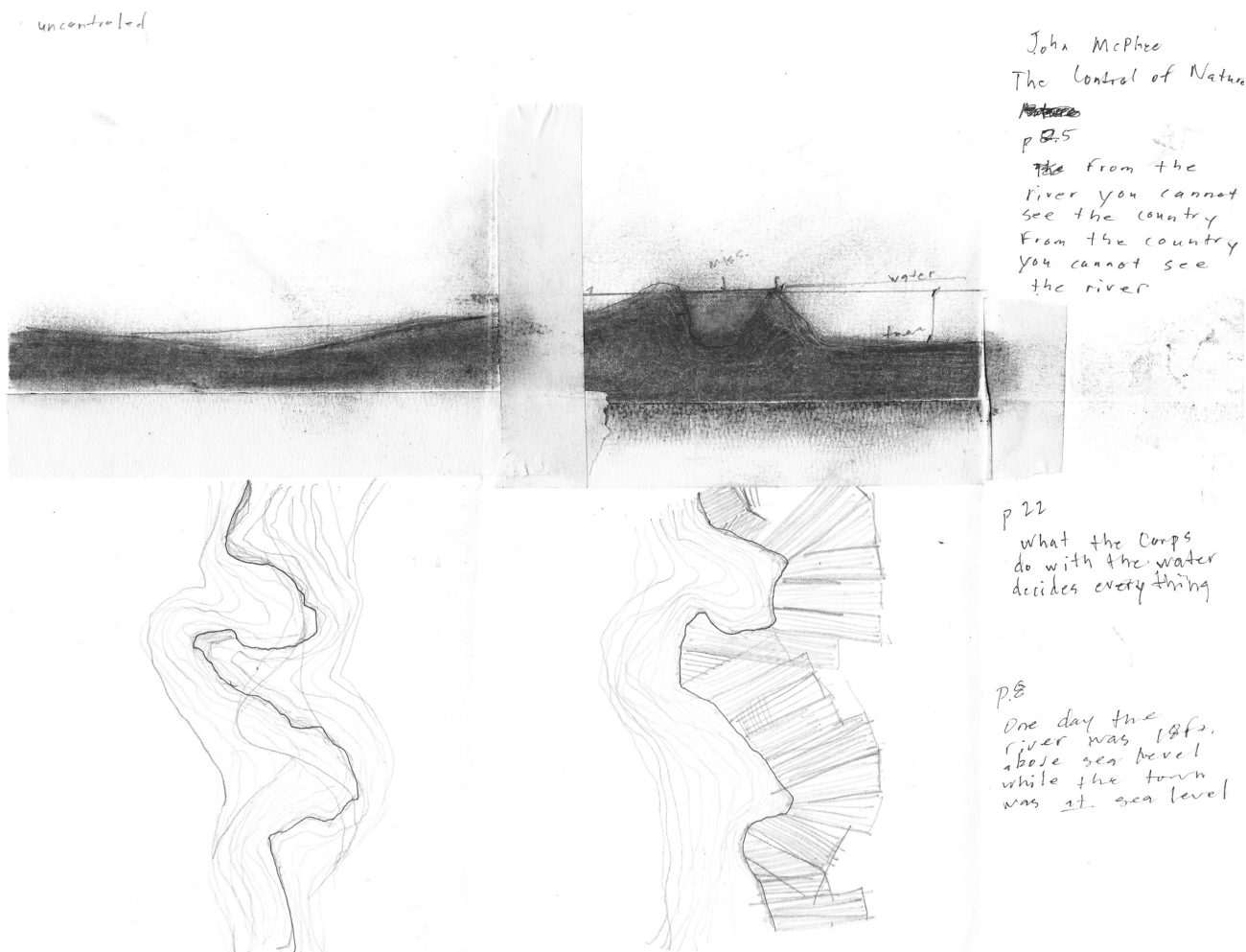
IT HAS EVERYTHING TO DO WITH ARCHITECTURE, BUT WE ARE NOT SURE WHY

Given the experimental, intentionally multi-disciplinary, and exploratory nature of the course, it is typically very difficult to describe. The course has developed as a series of seemingly unrelated readings and exercises. What do readings by a fiction writer, a cultural historian, and installation artist have to do with each other? Why should students of architecture spend 3 days camping in tents on an inaccessible island at the cusp of where the wetlands of the chenier and deltaic plains meet the gulf? The answer is not immediately evident or easily explained. We feel that these readings, actions, and experiences have everything to do with architecture and the education of future practitioners in our region. We are not sure why or how each piece

fits into the puzzle. We do know that the more difficult questions of connectivity are not being asked enough. This is not a course in Geology, Southern Literature, Coastal Ecology, Installation Art, Cultural Geography, Civil Engineering, History, or Folklore, per se, although each of these subjects are essential components of the course and offer relevant insights into what we feel will make an effective architectural practice. studiEAUX accepts that an architect may never gain expertise in all of these subjects, and therefore offers a targeted survey in each as they relate to the specific changing nature in the Chenier and Deltaic plains of southeast Louisiana.

THE WORK OF STUDIEAUX

studiEAUX has developed a series of assignments that direct students through an immersive methodology. Participants are expected to be self-motivated and able to do independent research. Innovation and experimentation are required. The



assignments foster work that focuses on discovering relevant questions. We are searching for a methodology that is more likely to find connections between seemingly contradictory facts:

Geological sciences tell us that the most effective strategy to avoid wetland loss and coastal erosion is to remove all manmade infrastructure that attempt to control nature. Coastal and Civil Engineering tells us that, although many control strategies have failed, many are essential to the region and many more adaptable infrastructural strategies are being developed. Economics tell us that the petro-chemical industry is essential to our region, and their removal would be disastrous. Cultural Geography tells us that the petro-chemical industry has eroded the rural agricultural Cajun culture that has had an important cultural production rate including cuisine, music, and architectural typologies. Folklore, literature and art tell us that the dynamic relationships of the region are not new. In fact, much of the cultural production stems from adaptability to change. Each of these facts, and many more, are true and each contradicts the other. The work of studiEAUX focuses on the contradictions.

For all of the class readings, discussions, and films, the students are asked to produce drawings. These drawings are meant to record their understanding of the readings/discussions while also posing larger questions. The drawings are a translation of multi-disciplinary subject matter into the language of our discipline. They are sometimes gestural, sometimes analytical or operational, sometimes documentary. The drawings are meant to be experimental, cumulative, and serial so that each week we are able to discuss the entirety of the course.

We start each semester with a coupled assignment. We read *Rising Tide: The Great Mississippi Flood of 1927 and How it Changed America* by John Barry. We also watch the film "Rivers and Tides" about the artist Andy Goldsworthy. The combination begins the course with an important comparison of two methods of understanding man's relationship to site and the effects of what we make in and on the land. Barry's book introduces many of the themes of the course by demonstrating that an interweaving of natural, political, cultural, scientific, and infrastructural forces caused the flood of 1927 to be a great disaster. The book also introduces the larger themes of cause and effect by explaining

the multiple events that lead to the causality of the flood and the multiple events that are a direct consequence of the flood. The work of Andy Goldsworthy offers an important counterpoint. His work, and the description of his process, is centered on uncovering and vivifying the latent potential of any site.

To build on the more general and comparative first assignment, our next task is to read John McPhee's article 'Atchafalaya' in his book *The Control of Nature*. This article is one of the few readings that address the specifics of studiEAUX. It is a study of our site, and the social, economic, political, geological forces that affect it. This article, although very short, is given great attention. We spend three weeks reading this 90 page article. The students produce a great number of drawings and diagrams in order to understand the ideas and information presented by McPhee as deeply as possible. Like studiEAUX, McPhee does not offer answers.

At this point in the course, we take the first of two intensive site visits/excursions into the Louisiana wetlandscape. Like the pairing of Barry and Goldsworthy, we pair the reading of 'Atchafalaya' with an overnight field trip. Students are immersed (sometimes literally) in the actual conditions about which they have been reading through an 8 mile hike into and across the wetlands to the Louisiana Gulf of Mexico coast. The destination is the barrier island known as Chenier au Tigre. Formally inhabited in the late 19th and early 20th centuries by 75 families, a hotel resort, school, and post office, the only visible remains of this culture is a graveyard nestled underneath expansive like oaks.

The hike to this destination allows the students to experience the natural systems at various scales that have formed the southern Louisiana landscape. There are bayous (rivers) that have yet to be altered by the Army Corps of Engineers and open directly into the Gulf of Mexico forming small natural deltas. These deltas change rapidly in response to the forces of nature by moving location, silting-in, and opening up several times over the course of a year. They are the natural valves between the brackish marsh and the saline gulf. Also to be seen first hand are Cheniers (ridges) of different ages that are either building or diminishing, beachfronts that are waxing and waning, high marshes that are draining into low marshes, and native grasses that



are claiming new terrains. A visible change in all of these conditions is preset from year to year.

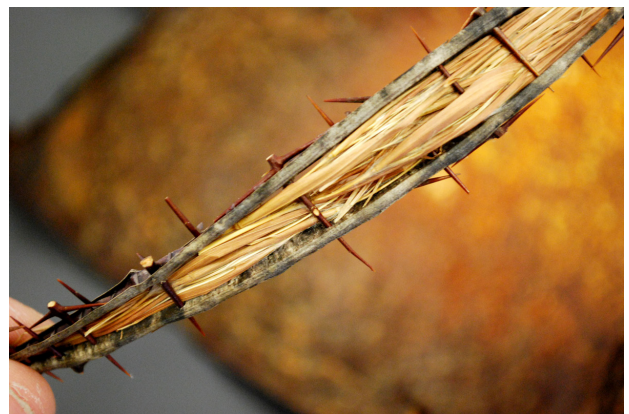
In contrast to these natural conditions, the students encounter the effects that the petro-chemical industry has influenced upon the wetlands. They experience first hand how small bayou deltas have been dredged and jettied for shipping lanes, how infrastructural lock systems and levees act as a valves between fresh and salt water transitions, how pipeline systems buried beneath the surface traffic oil and gas from the rigs in the gulf to the refineries farther inland, and how man-made objects appear upon the shore.

After approximately six or seven hours of hiking, the entourage arrives at Cheniere au Tigre, the most eastern barrier island of the Chenier Plain. Here the students experience a culmination of the micro-systems they have experienced along the way in combination with the geological transition into the Deltaic Plain, a one-mile-long breakwater infrastructure along the coast created by the Army Corps of Engineers, centuries old oak trees, and the ghostly remains of a recent culture that once inhabited the island.

Once the tents have been set up and a fire has been made, a group discussion relating to the newly finished journey, the readings of the past, and the project that lies ahead ensues. In the context of being *in the site*, the discussions take on a more immediate and primary clarity. The primary objective of this site visit is the visit itself and the discussions it elicits. The secondary objective is the production of a 'vessel'. A vessel is a container; it cel-

brates the distinction of one physical object from another. It is also a connector, or as Lori Ryker of Artemis Institute describes:

"That which is held is not always visible, is not necessarily physical. In many instances what we distinguish through holding cannot be seen at all. Meaning in our world is determined, created and defined by not only physical evidence but also the inseparable spirit of our lives."





How is a student to bring clarity and position to their immersive experiences in the wetlands coupled with the varied knowledge and ideas gathered through the readings? The students are asked this question, and create a vessel while on the trip. It must be constructed from materials found on the hike. It must be portable. The act of making, and the final craft should attempt to develop and communicate the emergent position of the student.

After the first site visit, the reading/drawing/discussion model is resumed. The readings continue to be comparative and multi-disciplinary. They include the introduction to *Plain Modern* by Malcom Quantril, where the description of Bryan MacKay Lyons work brings vantage to our discussions regarding the role of site, culture, local craft, and the making of architecture. Flannery O'Connor's article 'The Fiction Writer and His Country' from the collected essays *Mystery and Manners*, brings vantage to the responsibility of creative professions as they react to local issues with global implications. The reading also brings vantage to the relationship between science and art, data and expression. Annie

Dillard's essay 'Living Like Weasels' brings vantage to complex relationships of man to nature and the correlation between reason and instinct. Each of these readings lead to further discussions and development of the drawings.





The principle work of the course takes place in a three day/two night trip back to Chenier au Tigre. During this second Immersive Site Visit, the students design and craft installations that create a physical dialog with the landscape, the themes of the course, and their position regarding the connectivity



of the multiple aspects of 'site'. Students are limited to using found objects and natural materials. Natural materials cannot be harvested in any way that will cause detriment or permanently alter the landscape. The students are also limited in their efforts to the use of small hand tools such as pocket-knives and Leatherman multi-tools. Both of these restrictions help to influence an inherent philosophy of sustainability where the student is forced to physically work with the landscape rather than simply altering or dominating it.

The timeline of the excursion is such that the first day is for traveling to the site (this time by boat) setting up camp and discovering a site and a project. The second day is designated as an uninterrupted individual workday. The third day is for final documentation of the work, group discussions regarding the completed work, and traveling out. This excursion and its installations essentially mark



the high point of production in the course. The remaining two weeks of the course center on documentation of the semester's work.

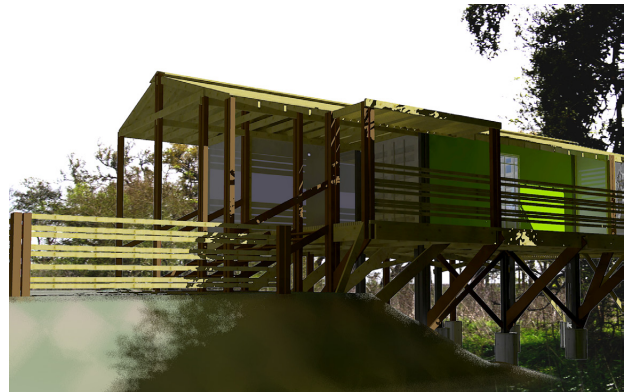
Students are asked to document their work in a manner that reflects their design intent in a book format. This process is the final design project of the class. It is the translation that lives on beyond the formal act of making and continues to communicate the experience, the interpretation, and the discoveries that were made by the student. It is in this final phase of the semester that the student has the ability to present the installations in a way that engages not only their understanding of site and their knowledge of the physical environment, but also present their work in the role of larger scale influences and multiple contexts. The students are challenged to maintain continuity between their experiential work throughout the course of the semester and the translation of that work into the book format.

CRITIQUE OF A SELF-PROCLAIMED EXPERIMENTAL COURSE

The development of studiEAUX is as experimental as the course itself. We are constantly questioning the course and its outcomes. Each year we fine tune and focus the assignments, readings, and discussions. The largest critique we have regarding the course is whether or not each class should build on the information and insights gained from the last. Because of the large amount of information, and the vast overlaps of systems, it seems obvious that a database would be built over time. In this way, each class would be able to start with more information and bring development to a higher level each year. However, we have decided that this may not be in the best interest of the students. As professors, we build upon the insights of each class and are more effective and focused each year, but we have come to the conclusion that each student has the right to approach the course with open eyes. We feel it is important that they have the opportunity to make the same discoveries and mistakes as the classes that preceded them.

In response to the students who have completed studiEAUX and expressed a desire build upon their experiences and incorporate more architectural, cultural, and scientific influences into the equation, studiEAUX II was developed last year. This course integrated students with property owners of Che-

niere au Tigre who have lost former family homes on the island to recent hurricanes and who wish to reestablish a presence there. The approach was a symbiotic one between the students and the landowners. The students questioned their preconceptions about future land use and shelter, and educated them on their landscape interpretations from their studiEAUX experiences. The landowners educated the students regarding the cultural history and land use of the site, as well as their profoundly embedded knowledge of the landscape.



Much like the act of camping in the wetlands offers an experience that can never be taught in a classroom, immersing a student in an interdisciplinary learning environment cannot be taught in a PowerPoint presentation. Immersion is the key to the success of studiEAUX. Because the majority of our students come from the region, they arrive at the university with vast knowledge and expertise in the natural systems. Many of them spent their childhoods farming, camping, and hunting in the wetlandscape studied in the course. studiEAUX therefore does not teach them these skills. studiEAUX makes explicit that this expertise can be directly applied to the profession of architecture. studiEAUX reminds them that the current condition

of the wetlandscape is in crisis and that it has probably been in crisis since the first human habitation. It is not necessarily the role of an architect to solve the crisis, but to intentionally operate within the dynamic geological and cultural landscape. With a more complete understanding of the myriad of overlapping systems that surround us, architects will be more able to work within the systems to find evermore relevant solutions. We know that if we are educating the next generation of architects in the Gulf South, then a course like this is essential. If we don't ask these questions of the students, then they will never have the chance to ask them of their profession.