Learning from Lafitte:
An Interdisciplinary Place-based Approach to Architectural Research and Education

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ABSTRACT:

An innovative trans-disciplinary research studio stack, designed to engage issues of coastal sustainability from a place-based perspective, is entering its second year at LSU School of Architecture. Pursued simultaneously through nested design studios, seminars, and independent scholarly research, these educational and research agendas are supported by the Coastal Sustainability Studios (CSS), a University-wide research initiative focusing on collaborative inter-disciplinary proposals for Coastal Louisiana. Faculty and students from the Departments and Schools of The Coast and the Environment, Earth Sciences, Renewable and Natural Resources, Engineering, Architecture, Landscape Architecture, Law, Economics, Geology, Geography and Anthropology collaborate on regional to community scale speculations throughout the lower Mississippi delta. This paper utilizes a CSS geography-based grant to test an NSF funded Long-Term Ecological Research (LTER) framework, developed to facilitate socio-ecological research, within the context of generating proposals for coupled built architectural and natural systems. By furthering the 1977 Venturi, Scott Brown, Izenour research methodology developed in "Learning from Las Vegas", through the integration of ecological and socio-cultural dynamics, time, and feedback loops (essential considerations within the dynamic deltaic system), a long-term architectural design and education research agenda that provides productive definitions of sustainability and resilience is emerging.

CONFERENCE THEME: Approaches
KEYWORDS: trans-disciplinary, coastal-sustainability, long-term, place-based, studio

INTRODUCTION

The geography of the Louisiana coastal Mississippi Delta is challenging for architecture because the terra firma on which architects typically set their buildings is dissolving at an alarming rate. Louisiana lost 1,900 square miles of land, roughly the size of the state of Delaware, between 1932 and 2000, (USGS, 2005).The underlying causes for this alarming rate of change and future land loss projections are only understood through multiple disciplinary lenses including hydrology, coastal ecology, natural resource management, and civil engineering (not inclusive). More traditional architectural studio research methods yielded fragmented conceptual models of the built and natural deltaic system which resulted in challenges for faculty and students engaged in architectural research, scenario building and design. We are currently developing an alternate conceptual framework developed to facilitate long-term socio-ecological research that was brought into the CSS studio space originally by a coastal ecologist. Through the integration of ecological and socio-cultural dynamics, time, and feedback loops, essential considerations within the dynamic deltaic system, a long-term architectural design and education research agenda that provides productive definitions of sustainability and resilience is emerging.

This trans-disciplinary practice, which facilitated the introduction and ultimate utilization of the Collins et. al. "Press Pulse Dynamics Framework", can be seen as an extension and expansion of the interdisciplinary approach proposed and initiated in the Learning From Las Vegas (LFLV) research studio and publication. Beginning in the 2010 fall semester, Louisiana State University School of Architecture (LSUSOA) is experimenting with an trans-disciplinary research studio stack, designed to engage issues of coastal sustainability from a place-based perspective. In conjunction with, and partially funded by the Coastal Sustainability Studio (CSS), a University-wide research initiative,

through which faculty and students from the Departments and Schools of Coastal Ecology, Earth Sciences, Natural Resources, Engineering, Architecture, Landscape Architecture, Law, Economics, Geology, Geography and Anthropology collaborate on regional to community scale proposals for coastal Louisiana, the Architecture school is pursuing nested research/design studios, seminars, and independent scholarly research located in the geography of Lafitte, Louisiana.

Similar to the LFLV studio which was "a technical studio…evolving new tools: analytical tools for understanding new space and form, and graphic tools for representing them" (Venturi, Scott Brown, Izenour, 1977, 73) the LSUSOA/CSS research is innovating trans-disciplinary methodology necessary to conceptualize the complexity of deltaic processes. The physical and operational structure of the lower Mississippi coastal delta is a dynamic set of natural and man-made circumstances that are evolving politically, economically, socially and environmentally through time, the most impactful (and least desirable) is land loss. Like Las Vegas, the delta "space is so different from the docile spaces for which our analytical and conceptual tools were evolved that we need new concepts and theories to handle it." (Venturi, Scott Brown, Izenour, 1977, 75). These new concepts and theories are increasingly modeled in systems theory and are understood to perform according to ecological non-equilibrium theory. A delta, like a

> "city is a set of intertwined activities that form a pattern on the land. The Las Vegas Strip is not a chaotic sprawl but a set of activities whose pattern, as with other cities, depends on the technology of movement and communication and the economic value of land…The aim here is for us as designers to derive an understanding of this new pattern." (Venturi, Scott Brown, Izenour, 1977, 76)

A delta, like a city is a complex system in flux. In order to study such a geography accurately and responsibly, it was and is essential to elicit the collaboration of other disciplines, a task that often requires open minds, intense translation skills, and patient communication. For the LSUSOA, the context of the CSS actualizes this exchange and support.

This paper utilizes the structure of the LFLV 2nd Edition publication to structure its findings and argument. In Part 1, the Collins et. al. "An Integrated Conceptual Framework for Long-Term Social–Ecological Research" is introduced as a Press-Pulse Dynamic (PPD) research framework encompassing multiple fields linked through dynamic process. Within this framework, formal and theoretical architectural observations and positions now become drivers or effects of larger environmental processes. The framework also facilitates the insertion of time and feedback loops in relation to sustainability, which has proven difficult for the discipline of Architecture to incorporate in a sophisticated way. Ultimately, the PPD provides a framework through which architectural research can be more rigorously tested and design process can be inserted into larger temporal/spatial environment.

In Part 2 the preliminary findings, circumstances and architectural implications of Lafitte, LA, are explored through the lens of LFLV. Though highly innovative and useful in 1977, at the time of the publication of the LFLV 2nd Edition, today the methodology provides underlying hints as to spatial/temporal functioning and land-water interface, operational behaviours critical to informing good design. In addition, LFLV provides a framework through which to understand spatial implications of a linear system. Like the Las Vegas strip, Lafitte, LA is a linear swath of development sitting on the high ground of a natural levee.

Though its historical significance is undeniable, recent scenario building and designing through the lens of the partially-informed methodology of LFLV has produced only partially operational architectural proposals. Today, our architectural understanding is more sophisticated and our ability to work inter-disciplinarily has revolutionized our ability to understand and model why Lafitte is so remarkable as a site where dynamic natural forces are so operational that ultimately architecture cannot ignore them and survive.

In Part 3 we present the Manifesto: a framework through which we can combine LFLV and Collins et. al. into a coupled human-nature methodology for architecture. And in Part 4 we examine additional dimensions of the system that complete a socio-ecological framework for design.

PART 1: THE TRANS-DISCIPLINARY MODEL

(Bringing LFLV into the 21st Century)

In 1977, LFLV cracked the autonomous architectural envelope utilizing two strategies simultaneously: shock value and trans-disciplinarily. The shocked the architectural community with their assertion that previously "taboo" geography of the Las Vegas strip was worthy of spatial exploration. Then they borrowed theory from Sociology, Semiotics and other disciplines and incorporated the operations of time and speed into their analysis.

Today, a similarly revolutionary paradigm shift can be produced by further expanding framework through which architectural space can be analysed. The Integrated Conceptual Framework for Long-Term Social–Ecological Research provides the framework through which this is possible. By inserting "design" as a behaviour within this

> "iterative framework [driven by] 'Press–Pulse Dynamics' (PPD), that integrates the biophysical and social sciences through an understanding of how human behaviours affect ecosystem processes. Such dynamics and processes, in turn, influence ecosystem services –thereby altering human behaviours and initiating feedbacks that impact the original dynamics and processes." (Collins et al., 2010, 2)

The PPD framework is "hypothesis driven, iterative, scalable, mechanistic, generalizable" (Collins et al., 2010, 5+7) while providing a service-based framework (services are provided by both architectural constructions and natural ecosystems; through the lens of services built and natural forms can be valued commensurately and considered as components of one system) which easily accommodates the insertion of the design process.

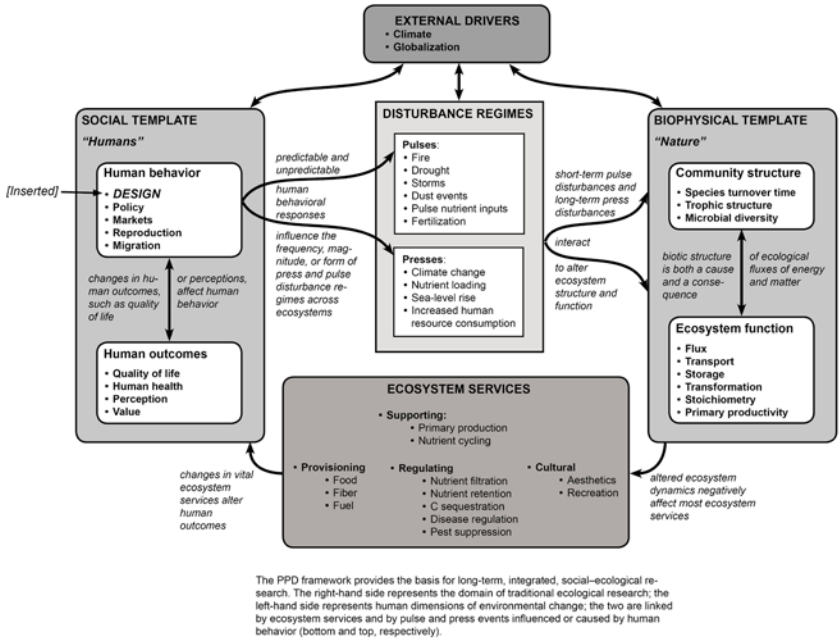

Figure 1: "The PPD framework provides the basis for long-term, integrated, social–ecological research, …" explicitly articulates the reciprocal relationship between the biophysical and social templates through press–pulse events and changes in the quantity or quality of selected ecosystem services." (Collins et al., 2010, 4). (Adapted from Collins et al., 2010)

> "The PPD framework contains four core components: (1) press and pulse events, (2) a biophysical template, (3) ecosystem services, and (4) a social template [where the design process is inserted]. The biophysical and social domains (areas of study) represent traditional disciplinary research paradigms that define processes within each domain. The biophysical template (e.g. geology, hydrology) constrains fundamental and well-documented relationships between biotic structure and ecosystem functioning, whereas the social template (e.g. legal regulation, social networks) encloses a range of possible human outcomes and behaviours, and the dynamics between them." (Collins et al., 2010, 3)

Press events are typically sustained and chronic such as climate change or sea-level rise, while pulse events are relatively discrete and rapidly alter species abundances and ecosystem functioning such as hurricanes or springtime flood sediment deposition. (Most ecosystems have a characteristic natural disturbance regime that includes the size, frequency, and intensity of pulse disturbances) interactions + feedbacks.

Ecosystem services drive the relationship between the Social template and the Biophysical template within the PPD Framework. Humans intentionally alter the Biophysical in order to extract natural resources, so critical for our survival and prosperity, ultimately providing the "pull" that puts the framework into motion. Ecosystem services are defined by the Millennium Ecosystem Assessment in the figure below.

In addition to what is outlined above, the overarching value of the PPD Framework ultimately lies in its ability to put humans within an activated hierarchical system where we are empowered correctly understand and accurately alter our behaviour within the system:

> "Moving environmental science to a new level of research collaboration, synthesis, and integration requires a shift from viewing humans as external drivers of natural systems to viewing them as affected agents acting within social–ecological systems (Grimm et al. 2000) – agents that depend on ecosystem services across a range of scales and feedback cycles. As the human population continues to grow, with attendant land-use, technological, and economic changes, it will place additional demands on vital ecosystem services (MEA 2005)." (Collins et al., 2010, 7)

Designers viewed as "affected agents acting within social-ecological systems" (Grimm et al., 2000) positions them properly within the hierarchy of a dynamic environment, facilitating a more accurate understanding of how design influences the environment, and how it can more effectively do so in relationship to the preservation and proliferation of the ecosystem services that facilitate life on the planet.

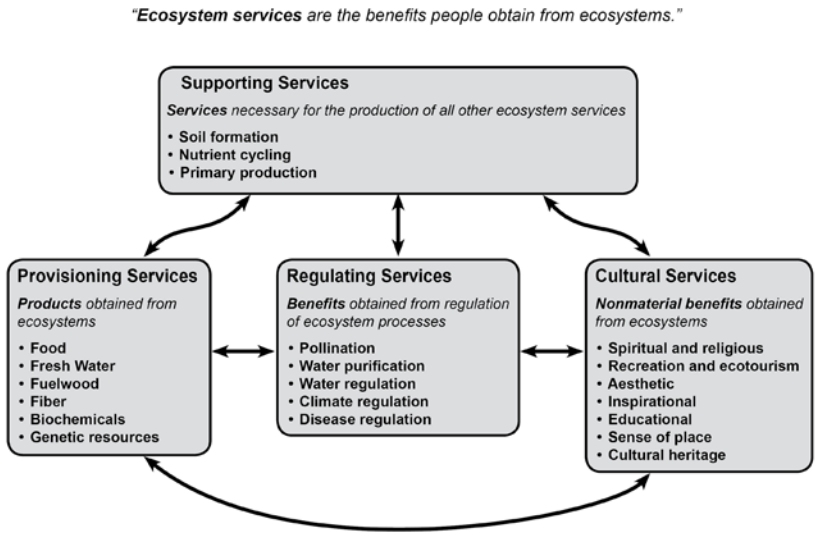

Figure 2: Definition of Eco-System Services.
(Millennium Ecosystem Assessment, 2005)

PART 2: SIGNIFICANCE FOR LAND LOSS, OR LEARNING FROM LAFITTE

(Significance for A&P Parking Lots, or Learning From Las Vegas)

The operation of land loss is critical to the understanding of the lower Mississippi Delta, and to the geography of Lafitte, LA. Not only does it encompass the diverse and dynamic set of biogeochemical and socio-cultural circumstances that have evolved over the course of history, the land-water interface provides the substrate on which architecture is physically placed. This a-typical condition forces architecture to innovate by addressing the larger contexts built and natural systems and cause and effect relationships. As Venturi and Scott Brown knew, "Learning from the existing landscape is a way of being revolutionary for an architect…to question how we look at things" (Venturi, Scott Brown, Izenour, 1977, 3) "In [their] research studio, which was explicitly directed at architects, they were concerned with linking scientific and scholarly research with architectural design" (Stierli, 2008, 13) work that the CSS is furthering through its trans-disciplinary space and approach.

This space is full of scientists who are trained to view the world objectively, a skill that is not developed in most architectural educations and practices. "Architects are out of the habit of looking nonjudgmentally at the environment, because orthodox Modern architecture is progressive, if not revolutionary, utopian, and puristic; it is dissatisfied with existing conditions." (Venturi, Scott Brown, Izenour, 1977, 3) The flip side is that scientists are not trained to, and often have discomfort associated with altering the environment, a skill architects perform through design education, practice and research. The two fields need each other's frameworks, skills and expertise to actualize meaningful change in an increasingly complex and dynamic environment.

2.1: ENVIRONMENTAL VALUES AND ENVIRONMENTAL METHODS

(Commercial Values and Commercial Methods)

Like LFLV, proper site analysis is critically linked to complex and dynamic deltaic conditions. Elevation change is so subtle, yet so linked to water level which is constantly shifting depending on tide and wind that is it difficult to understand where the land is, where the site is, what the site is, today and into the future. The "representational techniques learned from architecture and planning impede our understanding of" (Venturi, Scott Brown, Izenour, 1977, 75) that deltaic system. It is essential that representation and communication are innovated in order to facilitate understanding between diverse groups of academics and stakeholders. The implication is that architectural representation becomes more quantitative and that scientific representation becomes more qualitative and visual. The result: that scientists, social scientists, architects and stakeholders can communicate and problem solve in a more sophisticated way.

2.2: ARCHITECTURE AS LANDSCHAFT

(Architecture as Space)

The spaces and forms created by the unique landscape of the Mississippi Delta dictate the spaces and forms that architecture and infrastructure can create. Architecture is pushed and pulled outside of its typical building scale, is mated with infrastructure, is grafted onto ecology. It is only through architecture as a hybrid condition that sustainability and resiliency can begin to be addressed in a sophisticated manner, since the building is always just a component of the larger environment through which it interfaces. The delta is inherently a difficult dynamic environment for humans to inhabit; highly resistant to built form. This dynamism is simultaneously the mechanism through which the system's abundant resources are produced, the reason humans want to inhabit it in the first place.

2.3: ARCHITECTURE AS TIME

(Architecture as Symbol)

Beginning in 1929, in response to catastrophic flooding, the Army Corps of Engineers began the regional scale project of fixing or hardening this dynamic deltaic system through the construction of levees. Once protected behind levee walls, land appears safe from the destructive forces of water and suburban development, similar to that build all over the terra firma of America, began. Today, after immense investment in infrastructure, subsidence and sea-level rise threaten this development pattern. How do we understand the forces threatening this development so that we can design utilizing them? In an environment where everything is as temporal as it is spatial, where the temporal dictates the spatial, how can architecture address time in its process; potentially even privilege time over space?

2.4: OPERATION IN SPACE BEFORE FORM IN SPACE: LAFITTE AS AN INFRASTRUCTURAL SYSTEM

(Symbol in Space Before Form in Space: Las Vegas as a Communication System)

Architecture operates first and foremost in the dynamism of the delta as a systemic process, then as autonomous form. Autonomous form is inherently problematic in a landscape of substrate deletion. In this context, infrastructure becomes dominant over space. How can communities restructure to embrace this?

2.5: LINEAR SPACE IN THE BIOGEOCHEMICAL HISTORICAL TRADITION AND IN LAND LOSS

(Vast Space in the Historical Tradition and at the A&P)

Rivers create natural levees or high grounds parallel to their banks as flooding occurs, this flooding carries sand and soil particulate matter which is deposited as sediment once the waters become stagnant. These high grounds are linear spaces, the substrate of deltaic development.

2.6: MAPS OF LAFITTE

(Maps of Las Vegas)

The delta is flat and subsiding. What small elevation change exists is so subtle, yet inextricably linked to water level which is constantly shifting depending on tide, wind, storm surge, etc. These conditions make conventional mapping almost impossible, and not terribly meaningful. Additionally, because of the thick vegetation, vistas are rare. It is difficult to spatially locate on the ground in the delta.

2.7: MAIN STREET AND THE BAYOU

(Main Street and the Strip)

Because the river has created natural linear levees along its banks, the few roads that could be built in the delta were placed on or near these high grounds creating a system of 2 parallel linear modes of movement, one by boat and the other by car. Residences and retail were constructed on the high ground between creating a unique access situation. One door to the house fronts the water and the other door fronts the road, ultimately bringing the location of the front door into question. Pre-road, it existed clearly on the water side; today it is difficult to say.

2.8: SYSTEM AND ORDER ON THE HIGH GROUND

(System and Order on the Strip)

The order in this landscape is not obvious" (Venturi, Scott Brown, Izenour, 1977, 20) or clearly evident from the current spatial configuration of Lafitte. An analysis of current and historical activity is required to understand the evolving patterns of small scale working class residential, large scale McMansion residential, small scale fishing, shrimping and local retail and large scale oil and gas and transportation industries which make up the majority of the built environment.

2.9: CHANGE AND PERMANENCE ON THE HIGH GROUND

(Change and Permanence on the Strip)

Change is first and foremost driven by dramatic natural flooding and hurricane events. Industrial and residential economies also play a dramatic role in population size and demographic. Socio-cultural change tends to be slow as family ties and local culture and lifestyle are valued by multiple generations.

2.10: THE ARCHITECTURE OF THE HIGH GROUND

(The Architecture of the Strip)

Architectural types in Lafitte have varied dramatically through time and space. Vernacular architecture dealt with structural and geotechnical issues by suspending structures on piers, by floating them as boats, or utilizing minimal construction so that they were expendable in hurricanes and would relatively easily be rebuilt. Waterproofing and wind proofing was addressed through use of loose/thin envelopes and long/thin footprints. Trap doors in 2nd stories were employed to drain floodwaters and techniques to temporarily secure buildings and equipment for evacuation were common. In this environment, one cannot consider the architecture of hurricanes without a discussion of evacuation behavior.

Current architectural types deal with structural and geotechnical issues via slab on grade construction, elevating homes, or suspending trailers inside structural boxes on stilts. Waterproofing is addressed through elevation of the living spaces within homes, or of the entire house, the lack of drywall installed on the bottom 4 feet of walls or is not addressed at all. Windproofing typically comes in the form of balloon framing built to current wind-load code, masonry construction and hurricane shutters.

2.11: ARCHITECTURAL CONNECTIVITY AND THE SMALL, HIGH SPACE

(Architectural Monumentality and the Big, Low Space)

Occasional new developments have emerged that connect tightly packed residences on the 2nd story through the main porches and living spaces. These developments are seemingly inspired by Vietnamese Fishing Villages and facilitate weather protection, air circulation in summer, and pedestrian circulation and community.

2.12: LAFITTE STYLES

(Las Vegas Styles)

Lafitte has been occupied pretty much continuously from the late 1700's to today. Dynamic conditions have encouraged a visual and functional hodge-podge approach to the built environment. Examples of all of the following architectural types are present in the town: Shotguns, Galleried Creole Cottages, Bungalows, Plantation-like buildings, Quarters Type Cabins, Trailer on Stilts, Victorian, Classical Style, Greek Revival, Georgian, Ranch, and Neoclassical Colonial Revival McMansion.

2.13: INCLUSION AND THE DIFFICULT ORDER

(ibid)

This visual and functional hodge-podge approach to the built environment makes it particularly difficult to tease out the underlying order of the geography. "It is not an order dominated by the expert and made easy for the eye. The moving eye in the moving body must work to pick out and interpret a variety of changing, juxtaposed orders…" (Venturi, Scott Brown, Izenour, 1977, 53) The order certainly cannot be arrived at through analysis of architecture alone; environmental, economic and other drivers of change have had as much to do with the physical expression of Lafitte, but have left a softer mark on the landscape.

> "Henri Bergson called disorder an order we cannot see. The emerging order of [Lafitte] is a complex order. It is not the easy, rigid order of the urban renewal project or the fashionable 'total design' of the megastructure. It is, on the contrary, a manifestation of an opposite direction in architectural theory: Broadacre City—a travesty of Broadacre City, perhaps, but a kind of vindication of Frank Lloyd Wright's predictions for the American landscape." (Venturi, Scott Brown, Izenour, 1977, 52)

2.14: IMAGE OF LAFITTE: INCLUSION AND ALLUSION IN ARCHITECTURE

(Image of Las Vegas: Inclusion and Allusion in Architecture)

Like Las Vegas, Lafitte is a kind of pleasure zone with tourist driven swamp tours, boating and sport fishing amenities, and McMansions and Camps, all within a 35 minute drive from downtown New Orleans. Didactic images and juxtapositions are prevalent: oil and gas extraction jack-boats puncture the skyline like giant billboards and McMansions nestle up against old shotguns. This haphazard inclusive quality, resulting from the dynamism of the environment, has an effect similar to that described in LFLV of vitality and dynamism often absent in today's planned communities.

2.15: STUDIO NOTES - § ENVIRONMENTAL VALUES AND ENVIRONMENTAL METHODS

(§ Commercial Values and Commercial Methods)

Through the research "we are trying to train ourselves to offer socially *relevant* skills." (Venturi, Scott Brown, Izenour, 1977, 73)

PART 3: TYPICAL SUBURBAN ARCHITECTURE, OR SERVICE-ORIENTED ARCHITECTURE

(Ugly and Ordinary Architecture, or the Decorated Shed)…or, the Manifesto.

3.1.1: Some Definitions Using the Comparative Method

(ibid)

"To make the case for a new but old direction in architecture, we shall use some perhaps indiscreet comparisons to show what we are for and what we are against and ultimately to justify our own architecture." (Venturi, Scott Brown, Izenour, 1977, 87) An architectural exploration of sustainability and resilience in the delta begins with research into traditional methods of coping with heat, wind and water in the built environment, essentially the passive strategies utilized before reliance on modern infrastructure that has proved to be increasingly fragile in this dynamic landscape. Sustainable and resilient architecture existed in abundance before large-scale engineered levee systems were erected beginning in the 1930's and before fossil fuel driven environmental systems became the dominant form, as late as the 1960's in Lafitte, LA. In order to achieve a truly sustainable architecture within an aggressively dynamic environment, the built form must be seen as inextricably linked to the natural processes in operation within space and time and the systems and services of the larger ecosystem, not traditional American resource intensive suburban development.

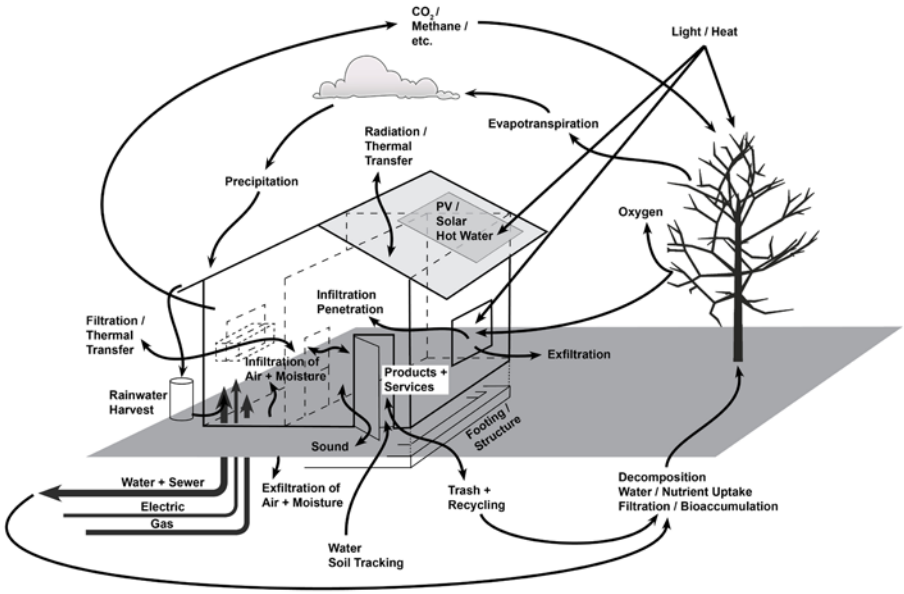

Figure 3: Built and natural environments behaving as one system. Adapted from: U.S. Department of Energy, Lawrence Berkeley Laboratory, http//:eetd.lbl.gov/ied/ERA/CalEx/partmatter.html 2003 (Author, 2011)

3.1.2: Explicit and Implicit Associations

(ibid)

Explicit and implicit associations must be expressed architecturally as well as operationally. Communication is facilitated most completely in this manner "…it looks like what is it not only because of what it is but also because of what it reminds you of." (Venturi, Scott Brown, Izenour, 1977, 93) Sustainable architectural form must operate both explicitly and implicitly in order to function adequately within its context. Ironically, the operational vernacular architecture of the delta has utilized this strategy to a great extent prior to the more recent domination of Mid-Century American Suburban Sprawl. Solutions to ventilation (verandas and apertures) and flooding (piles) often look like their operation, in addition to operating, and therefore remind and reference their operation. "These meanings come from our knowledge of technology…from the vocabulary of [vernacular] architecture, and from other sources." (Venturi, Scott Brown, Izenour, 1977, 93)

3.1.2: Research Actions within the Design Studio

(How to Efficiently yet Meaningfully Engage Architects in the Frameworks of Unfarmiliar Disciplines)

In the fall term of the 4th year, undergraduate professional degree students are instructed to understand the landscape and community of Lafitte. Through observation and design of modes of observation, mapping current conditions and dynamic relationships, and in building instruments for understanding processes and change within Lafitte, the students amassed the raw data needed to engage the design process. Next, through five phases of work:

- developing a *common language* based in landscape ecology principles: drawing and data collection
- documenting and *engaging* site and community

- defining site and *reflecting* on strategies: innovative modes of representation/ communication and temporal patterns
- *reengaging* research, reformatting and installing exhibitions on and off-site
- *proposing* a site specific systemic intervention within the town, and ultimately presenting it to the town (Chang, 2010)

As a service learning studio, the students directly engage both the inhabited landscape and stakeholder groups, ultimately investigating architectural representation of dynamic conditions, and examining the role of the landscape and geography in developing architectural strategies. The end of the term resulted in a strategic proposal presented to the Mayor and City Council.

Though this initial foray into the trans-disciplinary realm of research and production proved challenging for the students, and at times frustrating for the instructor because the quality of the architectural work was scattered and inconsistent, it clearly resulted in a much deeper understanding of and engagement with the geography and community than a typical research studio.

The resultant research studio product will take the emergent form of a zine to be produced and distributed freely to the community of Lafitte, the Southern Deltaic Louisiana, Academia and the Architectural Profession. The publication will disseminate select studio work along with faculty and CSS participant observations in order to facilitate a continuing dialogue (feedback loop) within the larger cultural context of the geography and related academic and stakeholder communities.

Because the research time-frame is a year at minimum, with the possibility of extending to 3 plus years, the evolving and expanding place-based knowledge and relationships are advancing in three simultaneous modes: a 2nd year graduate professional degree research studio, additional zine publication, and independent scholarly research conducted through the CSS.

We learned from phase one that the scientists were not engaged enough in the process, so the question becomes: how do we engage them more? An answer came through Environmental Systems Science…"[a]nd in a view of architectural education that embraced the complete art of environmental management, a visit to La Vegas would be as mandatory as a visit to the Baths of Caracalla or La Sainte Chapelle." (Stierli, 2008, 19)

In the spring term, the 2nd year graduate professional degree students take on Lafitte through the lens of Environmental Systems as a mechanism to expand architectural design paradigms by further integrating the sciences into the design process. Through an examination of the ecological, cultural and environmental control landscapes of Lafitte, they will ultimately make proposals driven by service oriented design. The first half of the 2011 spring term has been dedicated to redefining Lafitte's spaces at three scales: body, landscape and architecture (in that order), to facilitate innovative interventions into this geography increasingly resistant to human habitation.

This studio knowledge base is utilized to interpret and build upon the Undergraduate Studio's observations while engaging the resources of the CSS in a more aggressive manner.

PART 4: APPENDIX – ON COMMUNITY ENGAGEMENT AND POLITICAL WILL

(On Design Review Boards and Fine Arts Commissions)

LFLV confronts Design Review Boards and the legal system's lack of ability to appropriately qualify urban amenity and aesthetic. We need to expand the political arena of architecture in this circumstance to a more functional role, of providing services that help to mitigate and adapt to increasingly dramatic land-water interfaces. The PPD Framework includes "Policy" as one of the Social template behaviors, facilitating policy change. The ultimate goal is to actualize productive, service-oriented change through built/natural systems. Ultimately, political will is necessary to make any more than the most localized and small scale interventions in the system. But how, as architects and designers, are they engaged?

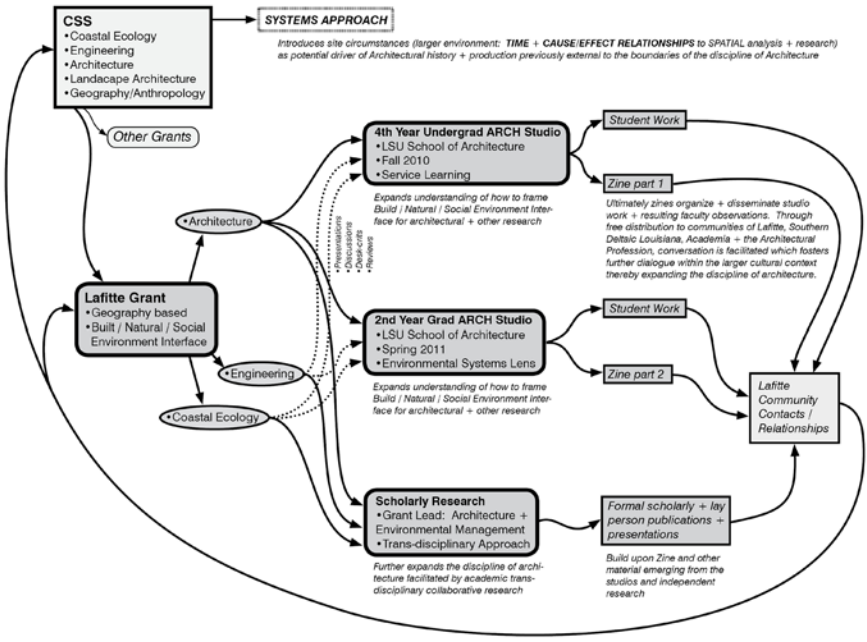

Figure 4: Structure of the research studio stack within the Coastal Sustainability Studio (Author, 2011)

The Zine, with its innovative visual and communication formats, has potential to engage community and elicit involvement. "Denise Scott Brown has pointed out that the specific use of imagery must also be seen in the context of advocacy planning…" (Stierli, 2008, 14) We are currently experimenting extensively with the relationship between content and visual form in order to engage as large an audience as possible in as meaningful way as possible.

CONCLUSION: A RETURN TO LFLV PART 2

Which Technological Revolution?

(ibid)

LFLV defined a new generation of architectural research, but without the inclusion of rigorous scientific input, its analysis of the environment was limited.

> "The most urgent technological problem facing us is the humane meshing of advanced scientific and technical systems [and ecosystem services] with our imperfect and exploited human systems, a problem worthy of the best attention of architecture's scientific ideologues and visionaries." (Venturi, Scott Brown, Izenour, 1977, 151)

Today, through the support of the National Science Foundation, coupled human-natural models are increasingly being developed. These models can facilitate our recognition of the feedback relationships that exist between socio-cultural and ecological systems that operate on the surface of the planet. This recognition, and developing understanding of how to design architecture within these systems, is increasingly critical within the context of climate change and its projected impacts. Because the PPD framework is particularly suited to integrating the built environment and architectural design and research, methodologies for its use by architects must be developed.

Through the use of this framework in architectural design and research, and in conjunction with the resources of the trans-disciplinary Coastal Sustainability Studio at Louisiana State University, architectural research is beginning the process of clarifying its position in relation to the environment

and the larger issues of sustainability and resiliency. Architecture itself is an inter-disciplinary discipline, and therefore tends to attract people with multiple skill sets and integrative minds. Tackling sustainability and resiliency within the complexity of our increasingly global world requires the development and execution of productive working relationships between designers and specialists in other disciplines. A productive framework through which those relationships can be facilitated and ultimately that sustainable and resilient architecture can be produced is critical to our future on the planet.

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