

Town and Country: Speculations on a Hybrid

MICHAEL McCLURE

University of Louisiana-Lafayette

URSULA EMERY McCLURE

Louisiana State University

In the contemporary realm, nature in the urban environment can be more than merely a park or an incidental condition. Nature can be an active agent working to filter and store water, manage storm water run-off, create biodiversity, reduce heat island effect, clean air, reconnect urbanisms to their historical and present productive landscapes, and produce food. Increased technology and construction developments provide for unique opportunities to create hybridized urban environments that minimize the consumption of arable land while still providing exterior nature for the habitants. As cities grow and the reduction of arable land threatens our food production and suppresses biodiversity, it is necessary to conceive of alternate and more communal ways of providing access and contact with nature. Our relationship with nature must change. It is no longer something we can consume without replenishing. We must become **both** stewards of its care **and** subsidize its existence. We can no longer assume nature will be present for us to enjoy and experience. This paper will discuss 2 research projects by *emerymcclure* architecture that investigate a complex layering of urban density, housing, infrastructure, and constructed nature and the speculation of a more harmonious, nurturing relationship between urbanity and nature.

The two projects, *NOKat*, and *nuova OSTIA antica*, to be presented investigate these issues (in New Orleans and Rome) at multiple scales from the macro to the micro. Each project looks at models

of synthesized urban occupations centered on active natural agents: at the scale of a city block, at the scale of an urban neighborhood, and at the scale of an urban satellite community. They also develop specific housing typologies that integrate natural systems. From linked backyards that manage runoff to spillway systems that support crop production and urban recreation, these projects all envision new tectonics where nature and buildings work as integrated infrastructure to become active agents for the greater good.

It is important to clarify that these projects require the speculative eye. In order to envision a new relationship between humankind and the external environment, many existing operations of urban occupation must be re-imagined. Preexisting constraints and preconceived notions of past urban occupations must be questioned and evaluated for their present relevance. Many past urban organizational structures are no longer healthy systems and to “keep fixing them” is similar to patching a hole in a tire. Eventually you have to buy a new tire or better yet, redesign the tire entirely. Both of these projects question traditional urban relationships with nature and attempt to create new symbiotic relationships where nature and urbanity co-exist. Many times this means a hybrid approach that uncovers pre-modern strategies and pairs them with contemporary or even nascent sustainable strategies. The traditional, pre-modern strategies worked with the surrounding natural systems by necessity.

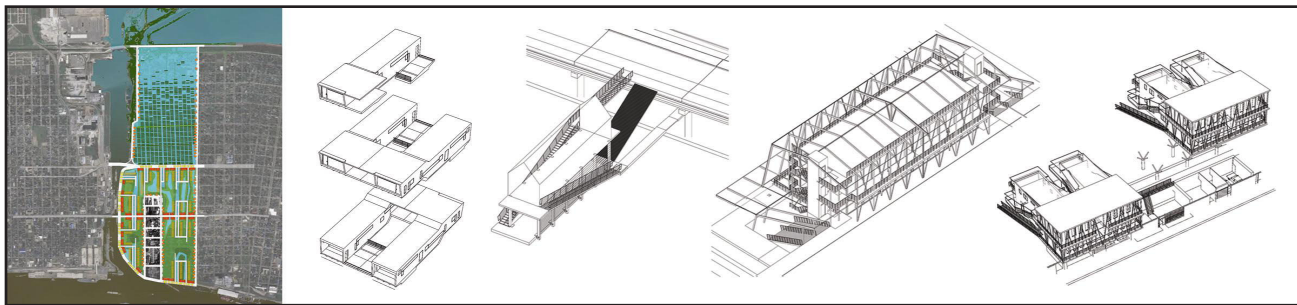


Figure 01: NOKat Site and Building Typologies

However, as contemporary designers, we believe that many of the attitudes regarding returning to a 'simpler time' are not the answer either.

Nostalgia is not suited to actively solve the complex issues of today. In addition, we believe that wholly modernist or futurist ideology ignores too many workable solutions for the sake of 'the new'. Both strategies hold clues to the answer. We prefer to struggle with the messy and hybrid 'both-and' approach. In the 1966 seminal work, *Complexity and Contradiction in Architecture*, Robert Venturi writes that

if the source of both-and phenomena is contradiction, its basis is hierarchy, which yields several levels of meanings among elements with varying values. It can include elements that are both good and awkward, big and little, closed and open, continuous and articulated, round and square, structural and spatial. An architecture which includes varying levels of meaning breeds ambiguity and tension.... Simultaneous perception of a multiplicity of levels involves struggles and hesitations for the observer, and makes his perception more vivid.¹

It is within these phenomena of contradiction that we generate and speculate a more vivid future.

From New Orleans relationship to the destructive side of nature or Ancient Rome's contribution to urban culture, these two projects investigate the past operational strategies in order to propose new viable ones.

NOKat

NOKat; no catastrophe, no category, no Katrina, was commissioned by the University of Texas at Austin School of Architecture for their symposium 'Counter Measures'. NOKat is a search for relevant building techniques in the 'terra viscus'. The 'Terra Viscus' condition, a super-saturated ground, one that is never completely solid or liquid, one that is never in stasis, requires us to vivify, to analyze, and to envision hybrid strategies in the physical, cultural, and phenomenal identity that is Southern Louisiana. NOKat is an architectural project, an urban strategy, a water management system, an ecological re-intervention, and a cultural catalyst. It is a mid-scale investigation, speculating on the relationship between urban occupation and nature at the scale of one urban neighborhood composed of multiple blocks. In order to investigate these ideas and their



Figure 02: Shared Resources

multi-scaled implications, it is sited in the lower 9th ward neighborhood of New Orleans, Louisiana and is envisioned as a deployable strategy that could be employed across the watersheds of the Gulf Coast. It is a true investigation in an expanded field as it studies an entire habitation system and its relationship to a changing ecosystem. The intentions, program, and eventual design proposal emerged through a series of If/Then statements:

***If** we can re-conceive the infrastructure to work with the natural systems, **Then** we can establish more relevant habitations.*

The aftermath of hurricanes Katrina and Rita brought many ongoing discussions to the national spotlight. One of the basic discussions evolved into two distinct arguments. The ecological argument that human habitation and development should stay out of the sensitive ecological areas and not be rebuilt was debated against the social cultural argument that these areas contained the homes of numerous generations that had a history and a right to remain or return. Great value exists in both sides of the argument. If both sides are simultaneously true and untrue, then in order to attain a more harmonious relationship between urbanism and nature, we must re-conceive the basic relationships. 'Both-And' might be possible through the act of design. The natural state of the lower 9th ward is a spillway between the Mississippi River and the wetlands. NOkat proposes a two-way valve beneficial to both sides, allowing the river to flood the wetlands during springtime high water flow and giving the wetlands much needed sedimentation and fresh water to combat saltwater intrusion and subsidence. This process then provides more stable ground for occupation. As the lower 9th ward is also the site of a unique and culturally important urban system, NOkat agrees that occupation like nature also should be re-introduced. The solution is to incorporate the existing infrastructure of man-made spillways, weirs, floodwalls and bridges with new building prototypes based on the active systems of traditional New Orleans architecture and urbanism: shotgun houses, three story mixed-use buildings, and urban townhouses. Combined, NOkat allows for a return of the natural systems and ecologies, introduces new productive landscapes, and offers the range of urban conditions found in pre-Katrina New Orleans.

***If** the infrastructure, habitation, and urban systems are combined, **Then** all can share resources, inform each other, and adapt in unison to change... daily, seasonally, at extreme conditions.*

Much like early habitations of the Mississippi Deltaic region, NOkat works with the inevitable natural systems. A flood is not a catastrophe, but the expected condition. Various levels and types of floods are incorporated into the urban habitation and they become an economic, phenomenological, ecological, etc. resource. A hybrid urban condition is created. The density of urbanity with the many social, cultural, and economic benefits is combined with the connection to natural systems, productive landscapes, and ecological benefits. For example, every site designated for urban occupation, housing, transit, commercial, education, etc. sits immediately adjacent or over a constructed nature. Constructed nature is always visibly present if not immediately accessible. Nowhere in NOkat does one lose vantage of the unique and integrated relationship between urbanity and nature. Either a home sits above a spillway channel or a backyard is a wetland or a car lift is the spillway crane.

***If** Saffir-Simpson hurricane categories are based on potential loss of property and flooding, **Then** no property loss or flood damage means no category.*

Hurricanes Katrina and Rita were not disasters. They were inevitable, should have been expected, and a vital part of the natural systems of the area. The disaster came from how and why humans had settled the area. NOkat incorporates the seemingly obvious strategies of early vernacular settlements in the area that worked with the natural systems. The major buildings are sited on the natural high ground. They are designed to allow for the flooding and silting necessary to maintain the high ground. The buildings are incorporated into the infrastructures. These infrastructures do not try to halt the natural systems, but instead they are employed to diffuse their catastrophic qualities. The infrastructures also provide structural and tectonic components to the urbanity while simultaneously allowing access to the nature. The raised bridge system best exemplifies this. This system establishes an infrastructural network for transit, sewer, water, and electricity and lies above the floodplain. The bridges also set up the structural system for the single-family platforms and floating docks. The

roadbed is designed to filter run-off into the spillway and wetlands and the floating docks are designed to handle the variation of the wetland environment. The system also provides the transit access to the homes and subsequently access into the wetlands and open water. More importantly, the raised bridge system expands upon the higher ground while allowing the more natural low ground to exist. A clear example of 'both-and.'

***If** we allow for the natural relationship between river and wetlands, **Then** the river's silt will rebuild the wetlands.*

Within the complex and intricate scientific relationships that diminish the wetlands daily, most scientists agree that the solution lies in the truth; the watershed of the Mississippi River created the wetlands and would continue to do so if not for the affects of human interaction. *Nokat* flips modern assumptions by putting the creation of wetlands and the health of this unique and important ecosystem at the top of the hierarchy. Humans originally, and still today, occupy this region because of the benefits of the ecosystem: oil, fish, access to over half of North America through the Mississippi watershed, etc. By envisioning an urbanism whose requirements are tailored primarily to the natural systems, we are attempting to find the hybrid of rural and urban habitation.

***If** "we are responding culturally to water or its absence," **Then** "water management is a frictionless key that unlocks archives of data about the built environment of other cultures like other elements of the built environment however it can also rise above the purely utilitarian into the range of art."*²

The current strategy is to divide responsibilities. The Corps of Engineers design and control the water systems to prescribe a fine line between wet and dry, safe and unsafe, natural and manmade. The ecologists work within the areas defined by the engineers as 'natural'. The architects work within the areas designated 'dry' and 'safe'. The natural reality is that those lines do not exist. In Southern Louisiana, the primary reality is wet and dry, natural and manmade, 'both-and.' Historically, cultures that looked to incorporating both created the most impactful and long lasting social systems, architecture, infrastructure and art. The Roman strategy of incorporating infrastructure with architecture, with

art, with social systems is an important example.

***If** we can establish awareness (knowledge) of the terra viscus condition as the given, **Then** we can propagate sustainably (cultural, economical, and ecological.)*

Sustainability is more than ecologies or technologies. It demands strategies that focus on the relationships between systems. It demands an understanding of what these systems do, not what they look like. We can only sustain the economic systems if our cultures are sustained in order to ensure the sustainability of the ecologies that underlie both.

*The scale of action we're talking about is not unprecedented... But it took a sense of national purpose. Not federal purpose. That's the key thing here. That's why people should care about what happens here. It's not because you have to love Cajun food or you love pulling some oil company's fat out of the fire. It's because, quite frankly, the country has a lot at stake here.*³

***If** you are going to live in it, **Then** you got to live with it. It's not **If**, it's **When**.*

There will be another flood. There will be another category 5 hurricane hitting the Gulf Coast. People will still be living there; they will continue to experience and expand their unique economic, social, and cultural systems. The only question is; will our cities, towns, infrastructures, etc. be ready for it?

nuova OSTIA antica

The second project, *nuova OSTIA antica* envisions a locally sustainable satellite city that simultaneously feeds back to the larger community of Rome. The proposal to the American Academy in Rome was to test the ideas and strategies developed in *Nokat*. If Southern Louisiana has a very distinct and powerful history of architectural and urban typologies that developed through the overlay of unique cultural systems and natural systems more so does Rome and its vicinities. At Ostia, Italy, one can find these same conditions at extreme levels. Therefore, a great opportunity exists to continue to develop and to test the hybrid strategies for the complex layering of urban density, housing, infrastructure, and constructed nature and the speculation of a more harmonious, nurturing relationship between urbanity and nature. *nuova OSTIA antica*

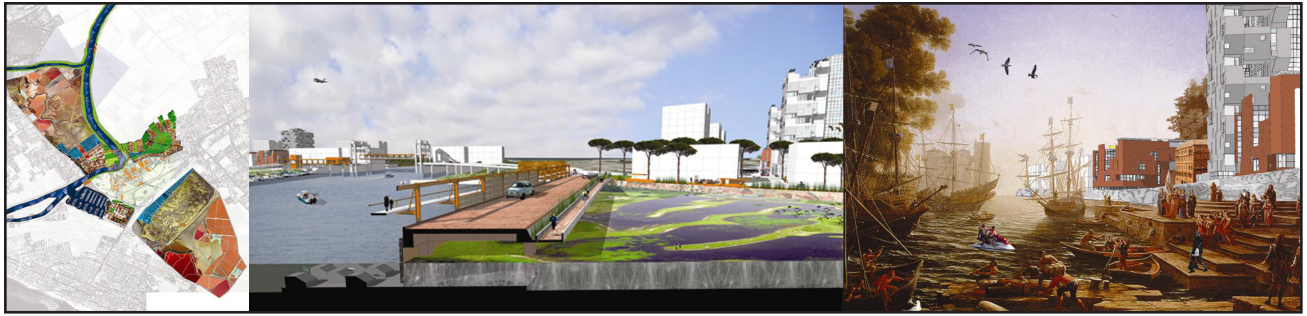


Figure 03: Speculations of a Satellite City

depicts the larger scale of the two investigations to speculate on models of synthesized urban occupations centered on active natural agents.

If you want to cultivate future habitation, Then you must understand origin.

Historically, Ostia was the port city and first satellite city of the Roman Empire. Laid out and organized under the auspices of Roman urbanism, Ancient Ostia presented a dense, urban environment

*In part stationary, in part travelling on business, composed of people of various origins and nationalities, uniting different habits, customs, and dress, this population of mixed character gave Ostia that lively aspect that is still characteristic today of large commercial cities.*⁴

Over the past 2000 years, in light of Roman history and the consistent deltaic growth of the Tiber, the ancient port city of Ostia now lies landlocked three kilometers from the sea, a magnificent ruin, but a ruin nonetheless. The archaeological scavi is located in Rome's Municipio XIII, which in recent years has seen population growth as Rome moves towards the sea. The growth is unplanned, uncontrolled, and very American in aesthetic. Strip malls, single-family developments, gas stations,

and other identities relative to suburban sprawl are slowly surrounding the renaissance borgo of Ostia Antica and the scavi. Rich farmlands are being sold off in quarter-acre lots so single-family homes (villettas) can be constructed. In some areas, single-family homes sit along a dirt road as no organized city services have been developed. The area is a strange place, mixed with these new McMansions and 400-year-old farmhouses. It is serviced by mass transit yet still the roads are congested and traffic is often at a standstill. Unlike Ostia Lido, which lies on the sea edge of Municipio XIII, the rest of the region appears to have no organized structure and appears to be developing as Houston, Texas, USA did in the 1980's and 1990's.

It is here in Municipio XIII, that we envision *nuova OSTIA antica*. Using the scavi as the "central park", this re-visioned Roman satellite community spans from the Fiumicino Canal to the Ostia Lido to Ostia Antica. *nuova OSTIA antica* attempts to combine historical and cultural relevance with contemporary needs and concerns. The major goals that enable us to strategize solutions are: to create more density in productive nature and human habitation, to re-center and reengage Ostia and the River, and to find appropriate relative scales of productive



Figure 04: Domus Typology and Salt Fields

nature to habitation. The major components developed to sustain these goals are: Water culture, Park culture, Building culture, and Infrastructure. Similar to *Nokat*, this project formulates a hybridized proposal where 'both-and' designates occupation, urban and natural.

Water and Park Cultures

*If we include in our developments natural resources instead of preclude them, **Then** we can cultivate a renewable cycle and sustain future generations.*

At the macro scale, the design proposal rehabilitates the ancient salt fields, reinvigorates the Tiber River, and reemploys both agra and aqua farming. The rehabilitation of the salt fields has multiple contributions. They return part of the municipalities back to their natural system; they create biodiversity (birds, brine shrimp, etc); they potentially can generate energy; they create an economic product; they provide space for recreation; and finally, they create a runway clear zone for Fiumicino Airport. The reinvigoration of the Tiber occurs at many scales, but at the macro scale, the actions employed include the creation of an eco-sanitation park (framed by the Dead River) and a marina system. The eco-sanitation park services the new community by filtering their wastewater via a wetland system that eventually replenishes the river via a spillway. The marina system includes a new "port" for leisure boats and two new lift bridges for marina access and safe harbor. Finally, *nuova OSTIA antica* utilizes both aqua and agra farming in its satellite community. Along the salt field edges that abut the building culture, lie fish farms (vallicoltura). Along the northwestern agrarian edge of the community, the fields are woven into the building culture creating smaller urban farming plots. The proposal also designates two Urban Forests where forest farming is speculated. Food production is conceived of a necessary and integrated component of the satellite city program.

Infrastructure Culture

*If infrastructure is viewed as a symbiotic component of the environment, **Then** new, more sustainable ecologies can be established.*

The aforementioned three macro scale actions address specifically the Water and Park cultures and

they are integrally linked to the Building and Infrastructure cultures. The Infrastructure culture employed takes its precedence from Ancient Rome and frames, literally and figuratively, the overall proposal. From the new train spur connecting the Lido line to the Fiumicino line to the reconstructed river's edge as water control, recreational circuit, and access thoroughfare, the infrastructural proposal serves as the integrated spine. Beginning with transportation systems (roads, tracks, waterways, bridges etc.) the infrastructure culture moves beyond the normative, layering upon these public works multiple programs and environmental responsibility. For example, a spillway is a road, a road is run-off filter, and the run-off filter is a jogging path. Infrastructure sustains and is sustained by occupancy of the community.

Building Culture

*If building is conceived of as a resource gain vs. a resource loss, **Then** zero-impact may become positive impact.*

These hybrid design strategies are employed throughout the proposal including at the micro scale of a singular building. As part of the investigation into the densification of habitation and productive natures, two housing typologies were created: the Domus and Insulae prototype. Both of these prototypes, preceded by their relevance to Roman urbanism and Ostia specifically, studied density in the vertical plane. Simultaneously, the prototypes also investigated aspects of suburban lifestyles that seemed to offer something other than the urbanism of Rome proper, but they employed more sustainable design strategies than the single-family home on a quarter acre lot. The Insulae prototype focused on a multi-unit house block composed of 2, 3, and 4 bedroom units. The Domus prototype focused on the vertical stacking of a single-family house where each level accommodates one unit. Both prototypes increase the density on a quarter-acre block a minimum of twelvefold. They investigate the differences between urban housing and suburban housing seeking to create a new typology for the satellite city. For example, in the Insulae prototype, the units stack like an urban apartment block but are eroded to create space for outdoor yards, pass-through systems for ventilation, and visual and physical connections to the public realm. In the Domus prototype, the large single

family home is rotated and stacked to achieve the privacy of the stand alone home but atop instead of next to each other. Both prototypes integrate with the natural systems entwining themselves into the municipality. From linked backyards that manage runoff and heat island effect, to roof tops that grow food, capture rainwater, and produce energy, to grey water and black water systems that support the eco-sanitation park, the urban forests, and the urban farming, these prototypes envision new tectonics where nature and buildings work as integrated infrastructure to become active agents for the greater good.

CULTURE

Architecture can only be sustained today as a critical practice if it assumes an arrière-garde position, that is to say, one which distances itself equally from the Enlightenment myth of progress and from a reactionary, unrealistic impulse to return to the architectonic forms of the preindustrial past. A critical arrière-garde has to remove itself from both the optimization of advanced technology and the ever-present tendency to regress into nostalgic historicism or the glibly decorative. It is my contention that only an arrière-garde has the capacity to cultivate a resistant, identity-giving culture while at the same time having discreet recourse to universal technique.⁵

Fundamental to *nuova OSTIA antica* are the multiple connections between old and new. To be a citizen of Rome, we envision it necessary to be consistently present in the city's past and future culture. Not only does the scavi act as the central park of the community but it also serves as the organizing loci. *nuova OSTIA antica* centers on the relevance of cultural sustainability: where the scavi serves as a reminder, a place, a central component, a tourist site and a part of daily life. Habitation surrounds it, transportation accesses it, agra and aqua culture lie outside its ancient walls, and infrastructure supports and protects it.

In order to stimulate the contemporary city, we employ multiple strategies that actively engage historical operative models through contemporary technologies. This critical analytical methodology leads to strategies that unify past, present, and future. By synthesizing these multiple occupations, *nuova OSTIA antica* attempts to stimulate a new productive experience for the contemporary urban dweller.

CONCLUSION

Urban occupation does not require the abolition of nature or vice versa. Humankind's occupation of nature must become a more symbiotic system of 'both-and'; 'both-and' must become the culture of habitation. These projects envision new tectonics where nature and buildings work as integrated infrastructure to become active agents for the greater good and a more viable future. In order to envision this new system we believe it is important to understand and acknowledge the identifiable culture of a place. Be it Rome or New Orleans where urbanity and nature might become integrated, unique origins, geographies, ecologies, infrastructures, historical buildings, and constructed landscapes exist. By investigating what was and what is that identifies a culture of a habitation and simultaneously understanding the potential/risks of future habitation, we believe one can contribute contemporarily to the continuation and development of identifiable culture.

The very act of designing and building is by definition an affirmative one. Today, an architecture that inquires deeply and radically into the relationship between itself and society, itself and the world, is more resonant and relevant than ever. The complexities of contemporary practice demand not only strategic realism but also critical discernment and conscience. Indeed, while architects have a minimal responsibility to do no harm, they may also aspire to do some good.⁶

ENDNOTES

- 1 Robert Venturi, *Complexity and Contradiction in Architecture*, (New York: The Museum of Modern Art, 1966), 31.
- 2 Dora P. Crouch and June G Johnson, *Traditions in Architecture*, (Oxford: Oxford University Press, 2001), 49.
- 3 Nichola Varchaver, "The Next Energy Crisis," *Fortune Magazine*, 8 (Aug. 2007).
- 4 *Ostia*, trans. C.H. Pennock, and R. Meiggs, (Rome: Istituto Poligrafico Dello Stato, 1961).
- 5 Kenneth Frampton, "Towards a Critical Regionalism: Six Points for an Architecture of Resistance," *The Anti-Aesthetic. Essays on Postmodern Culture*. ed. Hal Foster, (New York: New Press: Distributed by W.W. Norton, 1998), 16-29.
- 6 Joan Ockman, "One for the Sandpile," *Journal of Architectural Education* 62, n.3 (2009), 26-27.