40,000 Houses / 347 Apartments
Area 5: A New Unité

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Kinne Travel: **Paris and Marseille**, **France** (meeting with Lafarge Group, Unité d'Habitation, plus)
Studio Site: **Redevelopment Area 5**: Fort Lee, New Jersey (adjacent to the George Washington Bridge)

Studio Abstract:

On a redevelopment site in Fort Lee, New Jersey known as Area 5 the studio will explore a reinvention of Le Corbusier's Unité d'Habitation.

The project will follow a contemporary analysis of the building and its programming but also its materials, thermal and structural goals and its overall scale and architectural qualities. The studio is not overtly a call to work in the manner of Le Corbusier but it will focus on the fusion of programming, material and social goals in architecture as a unified structure. We will visit the Unité during our Kinne Trip. We will also revisit issues of total or comprehensive architectural planning in light of United States' housing in the aftermath of the foreclosure crisis. The studio will look at the Fort Lee site--adjacent to the George Washington Bridge--and the Unité d'Habitation as both an immediate and tangible model for the site. The area has several slab apartment buildings and Palisades Hudson River front; these quasi- Unité will be explored for their successes but also how they differ from the original ideals. On an economic level the studio is set against a backdrop of the tremendous investment in single-family houses made en masse by equity groups since the housing market collapse in 2008. Our particular study will be the Blackstone Groups whose purchase of approximately 40,000 houses from foreclosure has turned formerly individually owned houses into a single massive rental property and a hedged investment portfolio that will seek to unify the houses as a single investment within securities. A central question will be how do architectural models such as the Unité d'Habitation (a 347 unit apartment building, kindergarten, with retail provisions) sustain and compel re-evaluation when seen as *ultimately* small in scale against emerging forms of mass housing as embodied by a 40,000-house new form of distributed rental housing. More so how are new house as housing models reliant on a deep array of public resources in infrastructure that the Unité partially provided.

Unité d'Habitation, Le Corbusier, Marseille, France, 1952

Neither Utopia nor Market

By the time it was completed in 1952 there was only a few years left before it's apparent rational would be pivotally dismantled. The Unité d'Habitation became a symbol and a metaphor for the failure of the complete or unified dwelling; an all in one building that was both urban and architectural and that contained the programs needed for a centralized life.

If the Unité became a symbol of a utopia that had seduced architects into a desire for total dwelling (or a dream of managing life's needs and desires) it is also possible that the recoiling from that perspective that ensued for the next 50 years also meant that architects would hold very little sway in the design of housing for the second half of the century. In the United States we pivoted to the market and its means but also to the linguistic signifiers of its coded action no desires. Neither utopia nor markets; what followed was a codified search for our own agency and a study of our own capacity but also a negative stance as non-accomplice to social forms of control; not the planning of utopia or the markets.
As housing and its requisite urban planning production in the United States continues to operate under tremendous pressure of a prolonged process of foreclosure the immense scale of federal subsidy that has underpinned a deeply uneven recovery have left one thing clear: housing as we know it and allowed it to be realized for half a century is unstable and more so it has gone through wrenching forms of transformation that leave the market aspects; i.e., the *dream* of a responsive and thereby innovative market without an alibi. We have not seen any real innovation in the architecture of housing or its urban planning in decades and in our fear of utopia we have neither embraced our own control nor worked with markets in a way that grants their largess.

In all of this architecture is, of course, never innocent; but it's also often been misunderstood. Was the Unité what they said it was—a utopian dream? Perhaps, but if so where is the explanation of its deeply architectural qualities—its spatial porosity. It solidness (as a "slab") is countered by its own emptiness. It is rife with holes: nothing in the flow through apartments is solid expect people and walls; that is, concrete and bodies. And what about the Promethean roof garden— in the form of a children's school. Or a shopping corridor half way up the building in the form of a chromatic field and all set above the world on a thick cubist legs (without feet)? While utopia was starved after the Unité one cannot say planning for the masses ceased but certainly it was a planning that at the municipal level was a conflation of development and geography—a spacing of assets to sustain their financial viability and eventually a gorging on debt that itself was the instrument of speculation. Seven trillion dollars of debt held in mortgages on houses (surely produced almost exclusively without architects): development itself made wealth but it was the financial products that made the last phase of money and then managed to cause it to evaporate. Either equation is a crisis for architecture, but it is also a case for trying to see what was missed in the immense space between utopian planning and market logics. In all the simple equations and political speech the space of architecture itself seemed to spend fifty years in exile as governments secured housing markets and housing developers failed to innovate. In a way there never was a crisis of choices—there never was a significant attempt at an architectural utopia--at least not one as trumped up as indicated in the rhetoric of dismissal that to curtailed the potential of the Unité. But similarly in housing the markets have not been so capable of invention or innovation; that is, of garnering the liquid intelligence of market logics.

Did we make decisions on false assumption; was the Unité that has been left behind needlessly? What would it mean to look at the markets in light of the Unité today – especially in light of what is called a housing recovery in the United States but is far more complex and uneven than the simple news would indicate?

Our studio will take on an analysis of the Unité with a particular focus on five aspects of its design (not the five points) and also look at an imperative for architecture to again seek a more total reply to urbanization in examining the massive purchase of single family houses by hedge funds in particular the Blackstone group who have in the past four years purchased 40,000 properties out of foreclosure. If the Unité was understood as a large project—a total project—what then to make of a hedge fund's ability to purchase .2% of the United States households. And indeed to do this by buying and centralizing control over the very architectural type that was often seen as the antidote to collective housing and its systems of control—utopian otherwise.

Designers in the studio will be asked to take on an in depth analysis of the Unité and to gage its potential reinvention and meaning in the context of new Unites States urban and housing issues. Specifically we will see how the Unité could affect one's thinking about the Blackstone purchase of 40,000 single family houses and the creation of a new territory of housing.

Architecture and Infrastructure: An artificial divide between public and private space and monies.

Abstract: The Unité d'Habitation aspired to be both architecture and infrastructure; in the United States and worldwide state economies are increasingly privatizing significant portions of former public infrastructure. How does a private apartment complex today, of a scale akin to the Unité situate itself? Especially in the context of a small city in the shadow of massive state controlled transportation infrastructure.

Development of modern infrastructure is financed and executed in ways starkly different than those of past eras, where major legislation often diverted federal funds or borrowed capital through special bond issues for the development of roads, rail, dams, airports, utilities and other critical components. That development was subsequently managed by a public entity that retained the role of owner and operator. It is clear that a sea change in the role, resources and disposition of the Federal Government have rendered it unable to readily carry out the megaprojects the country needs to sustain its social and economic activity.

Private equity institutions have leapt into the resulting developmental vacuum, using their assets and management capabilities to restart infrastructure development. Firms like Goldman Sachs and Macquarie, an Australian-based global investment bank, have demonstrated that private entities can drive infrastructural development more efficiently, at lower costs with faster turnaround times. However the restructuring of our approach to infrastructure development has widespread impacts.

Public authorities no longer award infrastructure jobs to design teams. Rather, projects are awarded to consortiums - a far more complex entity comprised not only of architect and engineer, but also general contractor, subcontractors and one or more equity partners. The award is no longer strictly on the basis of the design. Rather, the winning consortium has presented what the authority considers to be the best balance of design, construction strategy, phasing, risk, cost and financing. To be sure, these non-design values were considerations of public authorities before the privatization of our infrastructure, however they were very often weighed through analysis by the authority itself, or by hired third parties (e.g. the

public authority in charge of developing a new airport would hire a cost estimator to run the costs associated with each submitted design). Now, the consortiums run the numbers and offer the authority a bottom line.

From a social perspective, this has led to securitization of our national infrastructure. Before design of infrastructure takes place, a financial model is developed by the equity partner that will lead to ongoing financial return at low to moderate risk. Only after that model is developed will design step in, and it is of critical importance that the design realize the financial model in concrete and steel. According to Lewis D. Solomon, who writes about the financial model used by Macquarie to invest in infrastructure, equity partners "[pool] the assets [of infrastructure projects] into funds it manages and sells shares in these funds. It groups the assets into specialized funds, which offer moderate but predictable dividend yields to both institutional and retail investors. Those assets are securitizable, that is, they are easily converted into shares of a listed fund that are bought and sold on a stock exchange. The strategy brings together the capital amassed initially by ... the world's infrastructure needs."

Prior to the recent privatization of infrastructure, design of projects such as the George Washington Bridge, Hoover Dam and Dulles Airport was performed by designers employed directly by public agencies ostensibly focused on the public interest. Following this sea change, designers of large infrastructure largely work for private equity firms in service of a financial model, with presumably indirect aims that involve that public interest.

This restructuring of project delivery methods draws into question the power afforded to the designer to advocate for the design, and likewise threatens to burden the designer with additional risk, as the consortium's financial model is often tightly constrained by operating costs, forecasted returns on the security, and revenue generated directly from users of the new infrastructure. The competition is often won with very little knowledge about the existing conditions or constraints intrinsic to the site despite the vast complexity of the proposed design, leading to potentially huge construction risk that must be shared by all members of the consortium, including the designer.

The equity partner goes on to further compound the gains of the equity partner. According to Solomon,

"Macquarie developed an integrated model, a one-stop shop. With its units advising, arranging, securing funding, executing and managing as many parts as possible and taking care of each step of every complex deal. This model allows [the equity firm] to pick up multiple-fee streams along the way."

"Macquarie advises public sector bodies that are considering the construction of a new facility or the privatization of an existing asset. It takes fees for originating, advising, underwriting and serving as the lead manager of a deal. It takes more fees for helping arrange the financing for an asset acquisition and raising funds that others invest. Once an asset is packaged into a fund, it earns management fees, say 1.0 to 1.5 percent of a fund's value, and incentive fees. The firm takes a healthy (typically 20 percent), hedge fund-type, performance fee on a fund's profits above a specified threshold level that varies based on benchmarks appropriate to the assets in a fund and whether the fund is listed on a stock exchange or not."

In summary, the private market forces currently reshaping our nation's housing are likewise reshaping the development of infrastructure in developed countries around the world. It will have no small impact on the design of these networks, which are used by countless millions in our country each day. How can design respond to these shifting forces?

Resource:
http://books.google.com/books?id=bbq_AAAAQBAJ&lpg=PA2&ots=bpxEzETCb6&dq=securitization%20of%20infrastructure%20assets%20goldman%20sachs&pg=PA3#v=onepage&q=securitization%20of%20infrastructure%20assets%20goldman%20sachs&f=false

Analysis and Initial Process

A_The Material Experiment

The studio will begin with a phase of analytical work on the Unité d'Habitation. We will use contemporary tools to analyze the buildings use of concrete, its structural and thermal performance. New work will not be required to be based in Le Corbusier's models but it will have to situate itself in this lineage and to critically evaluate who the Unité d'Habitation served its intellectual and pragmatic goals.

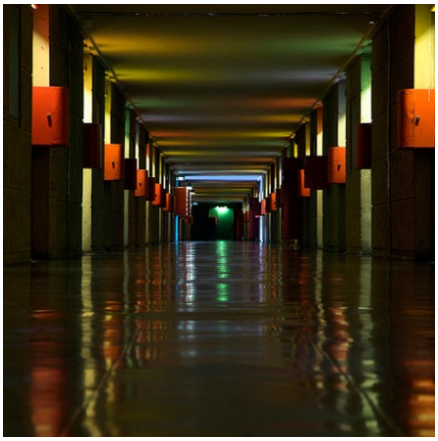
The studio will also explore the experience of occupying the Unité d'Habitation:

1_The floor thru duplex apartments
2_Roof garden and school
3_The circulation and public zones and paths
4_The shopping corridor
5_The Ground plane and garden / the city perimeter

B_Architectural qualities will be modeled and analyzed:

1_Reduce use of concrete by mass and volume
2_Find new urban qualities in how the building adapts to site.
3_Reinvent Porosity: that is, how the building makes mass and volume
4_Plus

C_Abstraction and Perception in Everyday Programming



The studio will also explore the canonic aspects of the Unité d'Habitation's programming in relation to abstraction and aspects of perception. You are asked to reinvent the building roof top school and exercise areas, the shopping area and duplex apartments. But to do this you will be asked to update ideas of a dwellings relation to nature and weather, to light and the sun; to reconceive the internalization of retail and in the Unité's case its use of chromatic interior lighting. In short: each aspect of the Unité d'Habitation will be reinvented but not without first evaluating the components in their abstraction and aesthetics. We will explore the buildings uses of abstraction and of perception especially in regard to everyday functions in program and use.

Studio Site: Fort Lee, New Jersey: Redevelopment Area 5

A string of slab apartment houses in the foreground of the George Washington Bridge, Fort Lee. Area 5 is immediately adjacent to the bridge anchorage.

City of Fort Lee, Redevelopment Proposal for Area 5

Schematic rendering shows two 47 story towers that will provide approximately 1000 rental apartments. The George Washington Bridge is in the middle ground. One tower is currently nearing completion on the open land. Private financing will provide retail, entertainment. The project is privately financed.

See: the Fort Lee Patch: http://fortlee.patch.com/groups/politics-and-elections/p/planning-board-to-consider-completeness-of-tucker-s-wf19476488c

Utopia? Or Market?

Architectural Utopia? Social Control?

347 Apartments, a school, a small shopping corridor and a garden.

The Unité d'Habitation has often been characterized as an overly constructed social environment; in the excerpt from Wikipedia the writers describe owners who become guest in their own overly communal and collectively controlled home,

Wikipedia: Le Corbusier designed the Marseille Unité d'Habitation as a self-contained, self-sufficient community. For the architect it was nothing less than an ideal architectural and urban form into which all of his research and principles about modern life, housing, and urbanism had been distilled.

The design of the Unité was influenced by three design precedents in particular: the monastery, with its seclusion, privacy and sharp distinction between the life of the individual and that of the collective; the Phalanstère*, an ideal building-type dreamt up by the 19th century utopian socialist Charles Fourier, and the ocean liner. For Le Corbusier, the Unité would provide a quality of life that was hotel-like and residents would effectively becoming guests in their own homes.*

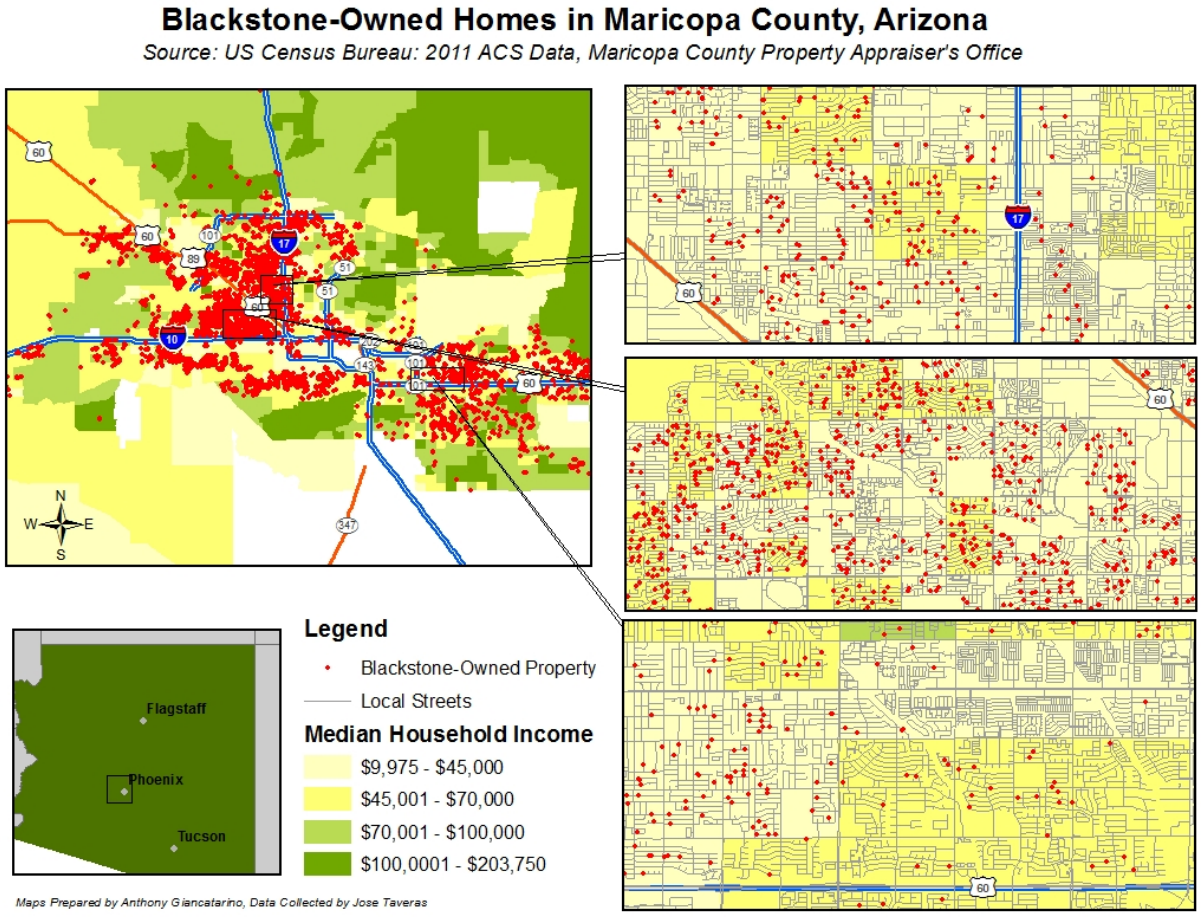
To achieve the desired level of self-containment in the Unité, Le Corbusier included every facility deemed necessary for daily life. As well as 337 apartments, the roof housed a kindergarten, nursery, paddling pool, gymnasium and running track. A shopping centre was arranged along elevated 'interior streets' on the seventh and eighth floors as was a restaurant, snack bar and hotel. As far as Le Corbusier was concerned, the notion of self-sufficiency was not only central to his concept for the building, it provided the key to successful communal life.

Financial Control with massive federal financial support:

40,000 Houses as one rental property:

*A lack of supply of new homes in the United States, combined with better fundamentals, has created an opportunistic environment for real estate investors, said Jonathan Gray, **Blackstone**'s global head of real estate. When asked if Blackstone, the largest owner of single-family homes in the U.S., is done buying them, Gray answered, "Not yet."In places like California it has gotten more difficult, but as you move east ... Atlanta, Chicago, Northern Florida—we still see good value," he told "**Squawk on the Street**" on Tuesday. According to the company, Blackstone Real Estate has $60 billion in total assets under management and $10 billion in capital available for investments. A portion of these assets, valued at over $5 billion, is made up of 31,000 homes in 13 U.S. markets.*

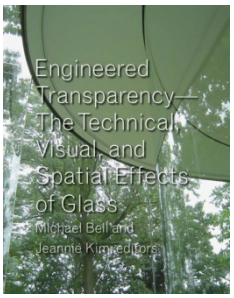
http://www.cnbc.com/id/100873475

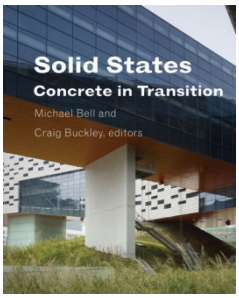


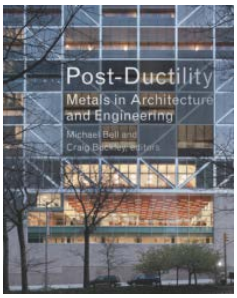
Parallel Engagement

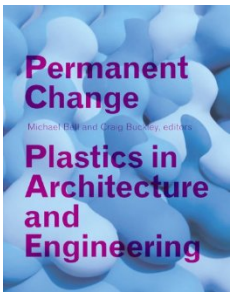
Historically, the architect and the engineer often worked in sequence, but today architects, engineers and a wide range of technical consultants often work with near simultaneous and immediate engagement and each affects the other at fundamental levels. More so, new levels of engagement in materials science and environmental engineering move the foundations of design and innovation to a technical level that dramatically changes the horizon for both practice and education, instigating a change in how industry, practice and academia engage each other.

Michael Bell is a Professor of Architecture at Columbia University and chairs the Columbia Conference on Architecture, Engineering and Materials. Bell's design work has been exhibited at the Museum of Modern Art, New York; The Venice Biennale; The Yale School of Architecture; The University Art Museum, Berkeley; and at Arci-Lab, France. Bell has received four Progressive Architecture Awards, and work is also included in the collection of the San Francisco Museum of Modern Art. Books by Bell include Engineered Transparency; Solid States, Post Ductility (all volumes on the Columbia Conference on Architecture, Engineering and Materials); as well as 16 Houses: Designing the Public's Private House, Michael Bell: Space Replaces Us: Essays and Projects on the City, and Slow Space. Bell has taught at Berkeley, Rice, Michigan and Harvard. His 2008 Binocular House is included Kenneth Frampton's American Masterwork Houses.









Zachary Kostura is a practicing structural engineer with Arup, a global multidisciplinary engineering firm, and has worked on the design of high-rise buildings in Europe and the Middle East. He specializes in structures with unique geometry that involves detailed computational analysis. A graduate engineer of the department of Civil and Environmental Engineering at the Massachusetts Institute of Technology, Zak has broad experience with many aspects of building design including architecture, civil and structural engineering and sustainability. Kostura teaches at Columbia GSAPP and has taught with Michael Bell in founding the MDS.