

Columbia University
Graduate School of Architecture, Planning and Preservation
A4003 — Core Studio 3
Fall 2008

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Housing: Values of Time, Distance and Energy

"When we find the President of the second Traffic Commission of the Paris Municipal Council basing all his research on the 'factor of speed which must be safeguarded at all costs,' then we can say that such a profession of faith is a program, and such a program is a profession of faith."

LeCorbusier, *The City of Tomorrow and Its Planning*.

"Except in certain airports and a few patches of urban peripheries, the image of the modern city has nowhere been realized. We have only fragments of modernity. The urban program didn't come off."

Rem Koolhaas

The studio will explore the design of urban housing in relation to density and connectivity to transportation infrastructure. The studio site is in Jersey City, New Jersey. With a focus on issues central to post-war housing in the United States including the rise of the suburban model, mass production, commuting, and relationships of housing to markets as well as government intervention, the studio will propose new forms of housing that are simultaneously local in scale, but also designed with a deep awareness of national and global issues. Particular attention will be given to the role of time in commuting—relationships between housing and infrastructure, and the increasing factor of energy costs at all levels of design.

Key factors include a studio-wide examination of United States housing paradigms in relation to a range of technologies that are at times literally architectural in character, or just as often, financial, social and ultimately political in nature but organized in instrumental ways as virtual "architectural" technologies. The driving force behind the studio is a hypothesis that the architect is poised at a threshold of new technical means and capabilities, and that the deep array of financial and political infrastructures that support housing are simultaneously facing immense demands to reorganize. This is a threshold moment in housing and urban design.

Studios will follow unique paths dependent on faculty and student initiatives but each studio is expected to address issues of mass housing such as means of construction and material choices and their impact on design; aspects of energy demands and how these are factored into the macro-scale aspects of transportation and commuting; social factors such as development models and their anticipated relation to household incomes and poverty; and attempts to deliver design in a way that positions the architect as a key participant in what is possible.

Each studio will follow unique methods and means, but the overall goals of the studio will focus on projects for the same site and with the same schematic programming giving comparability to our work. The studio is broken down into five research segments and each segment will offer input from a series of consultants. This will be material that is both technical and directly architectural as well as focused on the financial impact of development and how these issues can impact design and indeed how design can lead financial planning.

Part 1: The (new) 20 minute Apartment

How are household and work connected today in ways that have architectural and urban ramifications? How do contemporary issues of network culture and commerce interact and alter former versions of urban connectivity and networks?

Studio Lecture + Conversation:

Michael Bell: Time and Intuition: In Between Then and Now

Scott Marble: Designing Design

Karla Rothstein: Robert Moses New York

The image is a screenshot of a mobile application interface for the New Jersey PATH train system. At the top, it reads "nynj.net -New Jersey PATH Plan A Trip" and "Leave JSQ Arrive 14th by 7:59am Fri 07/18/08". Below this, there are three columns of information. The left column is labeled "<-earlier" and shows a train leaving JSQ at 7:29am and arriving at 14th at 7:49am. The middle column shows a train leaving JSQ at 7:34am and arriving at 14th at 7:54am. The right column is labeled "later->" and shows a train leaving JSQ at 7:39am and arriving at 14th at 7:59am. Each column includes a "Mobile Train Schedule" link and a "NJ Bus Schedules" link. The bottom of the screen has a navigation bar with "NJ Transit - PATH - Help - Sets - Terms of Use - Home".

Image: Station-to-Station: PATH Train Schedule for Journal Square to West 14th Street, Manhattan.

Synopsis: Network logics and the idea of a mobile but connected populace are not new to urban planning or architecture, but they have recently taken on a broad based consumer appearance and are increasingly form the embedded structure that organizes our lives. In this realm it is the connections between things that matter as much as the things (or places) themselves. Cities—long the physical network that have been a measure of social life—are again infused with processes of connection that are more likely to be based in digital communications but also re-examined in light of physical connectivity, distance and ultimately time. The values associated with time are newly made elastic and with it compensatory aspects of how we see or imagine time and how we use it to shape our being (in pragmatic or abstract ways). Time has become both more and less real at the same time— more fully measured, annotated, organized and striated, as it is also more fully discounted in relation to space and in relation to the forms of value that are infused in the lived world.

What impact do new modes or digital networks have in relation to time and to our daily lives if examined against such direct aspects of housing and urban life as commuting, or making a meal? Where do we live and where do we work—how far apart are they and what aspects of these relations are newly plastic today?

If new forms of networked life are in their infancy even after a ten-year incubation an equally pressing issue has become powerfully real even in the past year. Energy costs in relation to household incomes have soared in less than two years leaving whole sectors of what was a cornerstone of the American economy at risk and facing potential immense devaluation. The American commuter city and its requisite private-house or even housing are newly monetized in relation to energy costs and in relation to commuting, to daily life and of course to heating and cooling cycles of the dwelling. These issues are of course a long promised crisis and are emergent for decades, yet when coupled with a crisis in housing finance, energy costs have rapidly been assumed to be the key that will open a door to a new and unavoidable re-engineering of the sprawling city. Housing and transportation; housing and physical as well as

financial attributes; communication and all forms of networks are newly pliant and perhaps form a breaking point where we will begin to see vast changes in the world's urban landscapes.

In this light—and with an array of newly linked, highly networked and often deeply researched data sets urban planner and developers have begun a rapid (if late) response: they are re-zoning transportation sectors and hubs to allow for high density housing and are attempting to model cities that can diminish commuting times and costs. In the United States this is underway in Connecticut, in New Jersey—nearby Brooklyn as well as adjacent to subway stations in Oakland and along major sectors of the Bay Area Rapid Transit stations—it will happen nationwide. Suburban houses in the United States are losing value based on how far they are from city centers as fuel costs are newly factored into overall housing costs.

The issues link New York City and its regional partners in new ways to the wider United States housing markets. New York has countless opportunities for high-density housing and it has mass transit in place that serves these markets. New York could serve as a model for what density can achieve and it perhaps can make a renewed case for the high density that is key to New York's urbanism.

The studio will study a site in Jersey City, New Jersey—within commuting range of Manhattan and New York City. The site is well served by subsidized commuter rail and it has ebbed and flowed in its relationship to New York over the past half century as a job base or as a social or commercial hub. Our work will explore combining housing with the PATH Station at Journal Square in Jersey City.

Reading (Supplied as PDF on CourseWorks after August 12).

Foucault, Michel. "Space, Knowledge and Power" *The Foucault Reader* (New York: Pantheon Books, 1984).

Félix Guattari, "Regimes, Pathways, Subjects" *Incorporations* (New York: Zone Books, 1992), pp. 26-27.

Noam Chomsky and D. Barsamian, *The Prosperous Few and the Restless Many* (Berkeley: Odonian Press, 1993).

Mark Wigley, "Network Fever," in *New Media, Old Media*, Editors: Wendy Hui Kyong Chun; Thomas Keenan

Suggested Reading

David F. Noble, "Epilogue: Another Look at Progress", *Forces of Production: A Social History of Industrial Automation*, (New York: Knopf, 1984); pp.325-353.

Ludwig Siegele, "How about Now?: A Survey of the Real-Time Economy", *The Economist*, February 2, 2002, pp.3-20.

Robert M. Abarbanei, "300 Million Megabytes Flying in Close Formation," pp.1-4; C. Mercier, A. de Gobbi, F Adickes, "The Conde Nast Project: Case Study", pp.7-19; T. Eliassen, "Design and Manufacturing Components: A Case Study," pp21-30; A. Kiviniemi, "Information Sharing on the Internet in Collaborative Design and construction Processes," pp. 53-57; M. Ventre,

Studio Site: The New Satellites conflate Housing and Transportation
Studio Site: Jersey City, New Jersey

Brian Loughlin, Chief Architect, the Jersey City Housing Authority

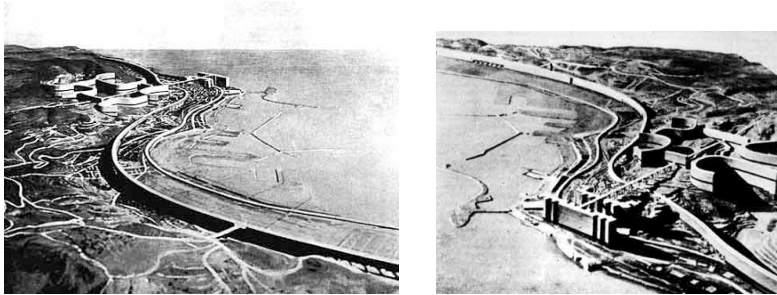


Image: LeCorbusier's plan for Algiers fused urban design, transportation and architecture as a singular system.

There have been historically significant attempts to fuse major public rail and transportation and housing—in cases they were literally intertwined—in others housing and rail were connected with intervening means and usually by way of cars or bus. In most of these instances in the United States a prevailing mode of privacy and of low cost energy influenced the final proposals. How have the factors that affect transportation and housing as well as urban density changed? Each studio will determine means to analyze these issues in a new light.

Jersey City and Bridgeport, Connecticut are both re-zoning redeveloping properties immediately adjacent to their commuter rail stations and in the case of Bridgeport there are proposals to allow housing virtually connected to the rail station and a new integral bus station.

Both cities have historically seen disinvestment as well as more recent wide-ranging incentives to create new development. In this light, the more recent and rapid rise in energy costs has created a situation where both cities see the most realistic chance in decades to re-imagine these sites. Jersey City is far closer to Manhattan than Bridgeport, yet Bridgeport's low costs housing potential and 74 minute proximity to Grand Central Station make it similar in commuting distance as many Manhattan-Brooklyn commuting patterns.

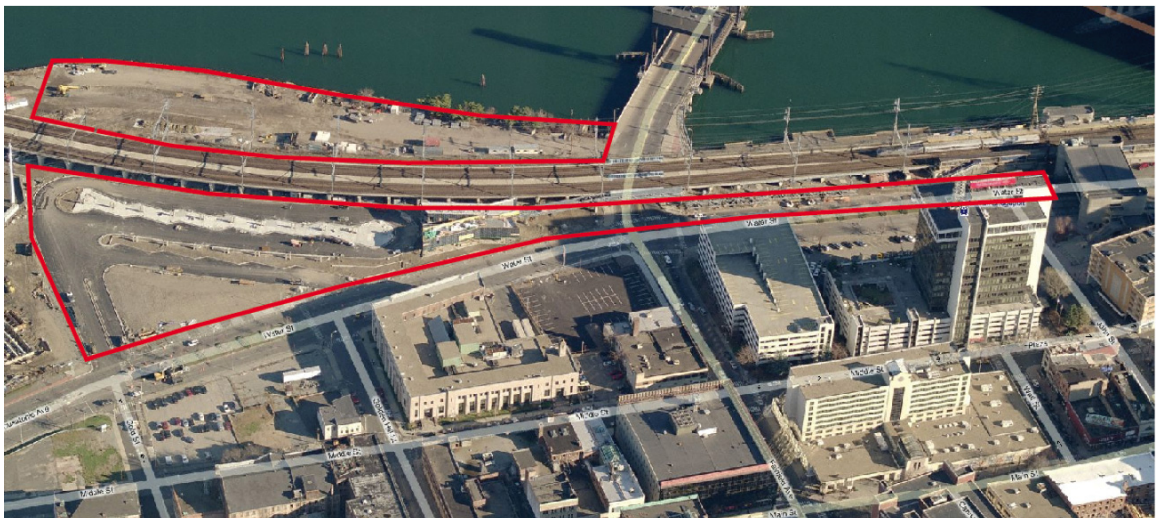
What are the options for Bridgeport if housing in Bridgeport was literally connected to the rail service? What are the options for Jersey City—the studio site—at Journal Square?



Studio Site: Jersey City, New City

Transportation: PATH Train

Time to New York City: 20 minutes but a disinvested and fragmented immediate environment



Comparable Site: Bridgeport, Connecticut

Transportation: Metro North

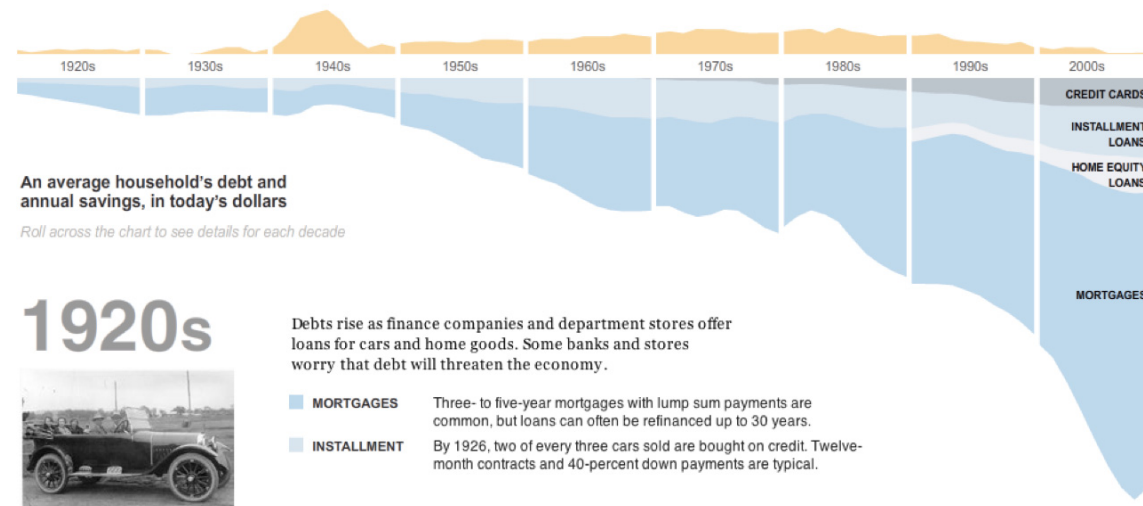
Time to New York City: 74 minutes and a newly intermodal bus/train/car depot.

Part 2: Debt and the Household Budget: What is Mass Housing in the United States?

How does the mass production of housing affect design? How does design affect mass production? How are new ideas of production and organization of production effect design and what is possible in housing?

Studio Lecture + Conversation: Housing for the Masses: New York City.

Robert Marino: “Luxury Housing” for Low Income Citizens: Taino Towers, NYC



Graphic Analysis: Amy Schoenfeld and Matthew Bloch: the New York Times.

Synopsis: The United States has never been an outward advocate of “mass housing” and has often propagated an image of its housing production by valorizing uniqueness and independence as well as private property and stand-alone private houses. Despite these indices of privacy over community housing is a mass project of production, land use and financing. Post-war housing in the United States was standardized even as it was atomized to smaller single-family houses and the financial models that supported it relied on its being standardized so it could be easily traded and its economic value readily compared and compartmentalized in relation to mortgage packaging and mortgage sales.

In the Netherlands social housing has routinely been understood to be a mass commodity, and it has often benefited both in terms of design and in terms of affordability because it more openly leveraged the advantages of mass production. In the Netherlands this has translated into housing with far more ambitious day-lighting regulation, and also broader support for middle to lower income housing without the attachment of stigma or cliché.

The studio programming calls for an immense amount of housing units and its integration with commuter rail stations that are state subsidized to lower commuting costs (and to keep a region competitive with other neighbors). Each studio is asked to prepare an investigation into the meaning of mass housing and what your work can deliver in light of the sheer number of units being proposed. Examine this in light of:

1. Opportunities for building systems and labor due to mass production.
2. Materials and quality of materials—distribution of materials.

3. Energy consumption and shared energy resources such as harvesting energy in time coordinated ways.
4. Social aspects of what 6000 units can produce in terms of cultural exchange or outward effect on neighborhood.
5. Economics: what is cumulative debt or mortgage for 6000 households: can household financial issues be re-calibrated in light of aggregate development. Can housing resources be shared or can design provide incentives for new forms of exchange between owners.

Housing assumes a major form of debt in the United States and recent changes in energy costs for both house and commuting are dramatically changing how we imagine urban and housing design. Can you as an architect make proposals for architectural change or contribution in light of what mass housing means today?

See US Household Debt Analysis in New York Times:

<http://www.nytimes.com/interactive/2008/07/20/business/20debt-trap.html#>

Reading (Supplied as PDF on CourseWorks after August 12).

The Masses: Reforming Space / Observing Culture; Le Corbusier The City of Tomorrow and Its Planning (New York, NY: Dover Publications, Inc., 1989).

Gwendolyn Wright, Building the Dream: A Social History of Housing in America (Cambridge: MIT Press, 1983); chap. 7 "Americanization and Ethnicity in Urban"

Richard Plunz, "The Garden Apartment," A History of Housing in New York City: Dwelling Type and Social Change in the American Metropolis. (New York: Columbia University Press, 1990); chap. 5, p.122-163.

Kracauer, Siegfried, "The Mass Ornament," The Mass Ornament: Weimer Essays, edited by Thomas Y. Levin (Cambridge, MA: Harvard University Press, 1995).

Elizabeth Wilson, The Sphinx in the City: Urban Life, the Control of Disorder, and Women, (Berkeley: University of California Press).

Michael Bell and Sze Tsung Leong, "347 Years, Slow Space," Slow Space (New York: Monacelli Press, 1998), p 14.

Roger Caillois, "October," The First Decade, "Mimicry and Legendary Psychasthenia," p 60

Theodor Adorno, "Commitment", trans. Francis McDonagh, collected in Fredric Jameson ed., Aesthetics and Politics (London and New York: Verso, 1999), pp.177-195.

Lefebvre, Henri; "Social Space," The Production of Space (Oxford, UK; Cambridge, MA: Blackwell, 1991).

Part 3: Poverty, Working Poor, At Risk Households How Affordable Housing is intended to Lose Money.

Affordable Housing development is since the middle 1980's is based on tax models that are designed ascribe tax incentives and thus value for financial loss—yet design today seems to be increasingly based in leveraging and producing value by way of efficiency. Design can change development models and could dramatically alter what is built and for whom. What is the value of efficiency in your work—demonstrate how it affects design. We want to re-write the rules of “affordable” housing.

Studio Lecture + Conversation: Housing and the New Forms of Risk

Peter Hance: Peter Hance is Director of Modernization at the Bridgeport Housing Authority. Hance has taught Housing Law and Finance at Yale School of Law and at Columbia and is a specialist in housing development for low income and public housing.

Synopsis: During the past 30 years—and in particular during the past decade—legislation that administered the United States federal government’s role in assuring low-income and poverty housing has incrementally reduced the direct government assistance provided to house constituencies that were understood to be at risk. During this time an increasingly complex, and multi-tiered method of providing incentives to the market development of low-income and affordable housing have been developed. These financial factors administered under the federal tax codes take an economic form as methods of subsidizing development by creating equity from financial losses on affordable or poverty housing. Low-income housing development losses are re-allocated to profit making companies who in return provide initial equity based on anticipated tax savings for development of low-income housing. A low-income apartment in New York City is in effect subsidized by way of General Electric’s need for a tax loss— global economic issues of GE are tied to local housing territories as a local loss is used against a global gain.

Though not inevitable these practices have largely been coupled with relatively singular architectural design strategies such as New Urbanism that also focused on issues of creating local themes of territory— simulations of traditional housing and town planning based in the 19th Century. What did not change during this time were the overall urban strategies that placed housing development (including New Urbanism developments) in a widely dispersed landscape that were essentially tied to the same urban infrastructure, economies and far flung development models of contemporary cities nationwide. New Urbanism has never been more than a nodal fragment of the same urban models that are at play since the end of World War II. These models are forced to change today and housing as both an urban and architectural issue as well as a wider economic and design issue will inevitably change more in the next ten years than it has in decades.

These incentives affect virtually every spectrum or strata of housing development. Ten years after the dramatic changes instigated during the Clinton Administration that linked changes in low-income housing development with welfare reform, housing is more central then ever as a national issue and the issues are now central to what is the middle-class. The terms have again changed and with it there is a demonstrative need for innovation in design.

The issues in some ways mark a return to an old proposal: high-density housing adjacent to if not integrated with transit hubs. They also mark a watershed moment when a newly urgent factor— energy costs and affordability—are forcing a re-appraisal if not design, of the United States urban fabric.

How Does Fannie Mae Work?

Fannie Mae was originally formed by the federal government in 1938 in order to supply liquidity to the mortgage market. Since 1968, it has been a private corporation. Here is how it works:

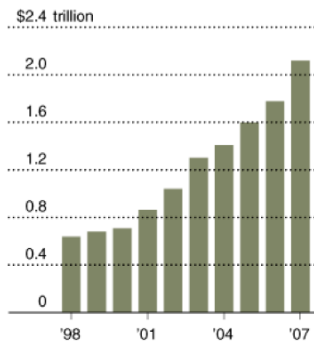


Fannie Mae **takes mortgage loans** from banks, in order to repackage them in the form of **mortgage-backed securities**. There are limits on the types and size of loans it can guarantee.

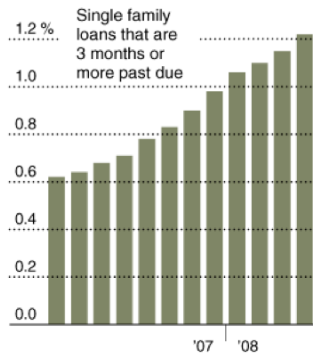
Those **mortgage-backed securities** are sold to investors, and Fannie Mae guarantees that the loans will be repaid.

Fannie Mae also **borrow money from the debt markets**, traditionally at a rate much lower than other banks, and uses it to **buy mortgages it holds as its own investments**. By buying these loans, Fannie injects new money into the housing economy.

What Are the Problems It Is Facing?



Guaranteed Mortgages
Fannie Mae's exposure to the housing market has soared. Its outstanding guaranteed mortgages tripled from 1998 to 2007.



Delinquency Rates
The delinquency rate on Fannie Mae mortgages is rising. This increases the chance that the company will have to make good on its guarantees.



Borrowing Costs
Borrowing costs are volatile and rising, reflecting investor concerns about Fannie Mae's health.

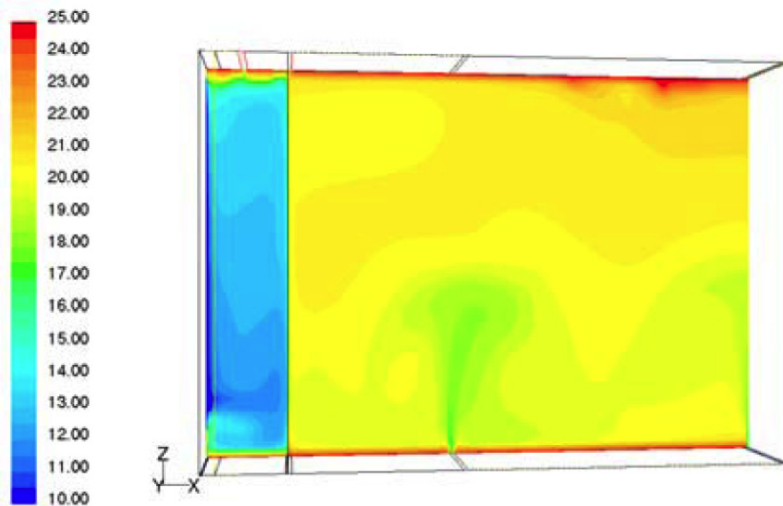
Studios should set a strategy for these issues and examine:

- Household income and expenditures for housing, transportation, insurances and food.
- Architectural Technologies and their impact on design and household budgets.
- Urban Infrastructure and Transportation: the network from home to work; home to school; by car, bus, subway, commuter rail, walking.
- Risk and the National Picture: how are households exposed to financial risk in relation to energy costs and how can architecture respond. What households were most affected by affordability?

Part 4: The Architect has a refined relation to Consultants; Design for Structure, Enclosure, Energy.

Historically it was at least possible to define the architect and engineer as defined by what each other lacked, but today this equation has been dramatically changed—engineers, architects and a wide range of technical consultants work in a near simultaneous engagement and each affects the other at fundamental levels that are not defined by lack but by parallel engagement. Your work with studio faculty is asked to correlate with work done in the GSAPP Tech Sector courses and in particular with work in structure, enclosure and with wider concepts of energy management and resource organization. The studio will have licenses available for use of Eco-Tect software.

In his essay, “Aldo Rossi: The Idea of Architecture and the Modena Cemetery,” Rafael Moneo wrote that, to secure the authority and foundations of architecture in the post-war city, Rossi had adopted an “evasive” and self-imposed amnesia to technology. As Moneo wrote, Rossi’s architecture was “deliberately forgetting the framework of the real, even at levels as evident and compromised as the technological one.” In contrast, aspirations for architecture today are increasingly based on highly engineered forms of design; more often than not, they are situated within economic and political imperatives that are understood as fortunate links to high-end production and research techniques. At its most advanced, this intricate work is deeply organized, and its relation to production follows systemic coordination and control factors. Yet, architectural goals that run counter to these factors persist. Counter intuitive to the efficiency of new technologies (and to the abatement of risk), we often see design strategies destined to aggravate the stability and resolve of these new controls. As technologies allow for new levels of risk amelioration, we also see new levels of ambition and a renewed fusion of design with technological potential. One is not possible without the other. Determine how your design work is aided by technology; is design made possible by it? Is technology integral to your work and are engineers and consultants on board immediately in the design process?



Computation Fluid Dynamics model for SANAA building by Mark Malekshahi with Transsolar: A new level of measurement and rigor in producing an interior space.

Studio Lecture: Energy and the Resource Management at the Building Level;

Toshi Oki, Architect, SANAA and Mark Malekshahi, Plus Group

Reading (Supplied as PDF on CourseWorks after August 12).

Beatriz Colomina, "Interior" in *Privacy and Publicity, Modern Architecture as Mass Media*, pp 232-281. (Cambridge: MIT Press, 1994).

Cacciari, Massimo, "The Chain of Glass," *Architecture and Nihilism: On the Philosophy of Modern Architecture*, Yale University Press.

Charles Eames, John Entenza and Herbert Matter, "What is a House?," *Arts and Architecture*, July 1944, pp.22-39.

Kenneth Frampton, *Modern Architecture, A Critical History*, "The Deutsche Werkbund 1898 - 1927," Chapter 12, p 109.

R. Buckminster Fuller, "Designing a New Industry," collected in Joan Ockman, ed., *Architecture Culture 1943-68: A Documentary Anthology*, (New York: Rizzoli/Columbia Books of Architecture, 1992), pp.86-92

Rohe, Ludwig Mies van der. "Industrialized Building," *Programs and Manifestoes on 20th-Century Architecture*. Ulrich Conrads. (Cambridge, MA: The MIT Press, 1971).

Rafael Moneo, "Aldo Rossi: The Idea of Architecture and the Modena Cemetery," *Oppositions*, summer 1976 (New York: The Institute for Architecture and Urban Studies, 1976), p.9.

Part 5: The Urban Subject—Inside the Urban Dwelling

“Predatory equity is undermining the best efforts of New York City and state elected officials to slow the loss of affordable housing,” Benjamin Dulchin, deputy director of the Association for Neighborhood and Housing Development, a nonprofit organization, The Times said. “Both the private equity funders and the lending institutions are aware, or should be aware, that harassment of tenants is taking place as a result of their financial models.”

Questions of Rent Tactics by Private Equity By Gretchen Morgenson, New York Times, Published: May 9, 2008

The era of an urban citizen as a valorized subject who despite the complexity of metropolitan life thrives despite duress has its counterpart in a view of contemporary life as deeply undermined by virtually predatory realms of power. New York City has epitomized the potential of urban life for more than 150 years. Factors that sustained housing in New York at affordable levels are always facing revision: rent control and other forms of legislation that attempt to moderate open markets, for example face renewed revision in part because of the dexterity of networked real estate holdings. As reported by the New York Times, private equity firms have found rent controlled apartments newly attractive in part because they can assemble them easily and manage them somewhat remotely as a packaged investment. The studio asks you to design for two satellite sites of New York City but in the context of new networks are the satellites actually increasingly unique new ventures and stand alone places. The quoted text above shows a potential for the loss of rent control apartments in upper Manhattan—if that were the case would your work in Jersey City and Bridgeport become a new zone of affordability?

Please contextualize your work in relation to themes of urban life and of an urban subject.

Studio Conversation: Cities and Subjects

Branden Hookway, Author, *Pandemonium: The Rise of Predatory Locales in the Postwar World*

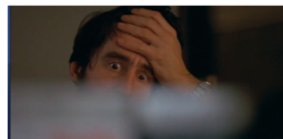


Image: A genre of films depicted a generation's strong reaction to crisis. How is crisis represented today—is reaction to crisis as overt and direct? Film stills: *The Killing Fields*, 1984. New York Times reporter Sydney Schanberg replays scenes from Cambodia after his return to his New York City home/apartment. What windows sustain the contemporary apartment?

Reading (Supplied as PDF on CourseWorks after August 12).

Bruno Zevi. "The Pros and Cons of the Horizontal Window; the Perret, LeCorbusier Controversy," *A+U: Visions of the Real, Modern Houses in the 20th Century*: 1

Schedule

September

Week One

3 All School Meeting: Wood Auditorium 2PM—3PM
Studio Introduction: Room 114: 4PM – 6PM

5

Week Two

8

10 **Part 1: 20 Minute Housing: Room 114**
Michael Bell: Interiority: Extensive / Non Extensive Space
Karla RothsteinRobert Moses: Radical Urban Transformation
Brian Loughlin: Introduction to Jersey City

12

Week Three

15

17 **Part 2 and 3: Debt and Mass Housing and Energy**
Peter Hance: 30% of Mean Income Means? / 50% of Mean Income Means?
Moderators: Michael Bell

19

Week Four

22

24 **Part 4: A Refined Relationship to Consultants**
Mark Malekshahi: Thermal Engineering
Toshi Oki: MEP and Architecture

26

October

Week Five

28

1

3 *GSAPP "Solid States" Conference*

Week Six

6

8 **Part 5: Urban Subject**
Brandon Hookway: Author "Pandemonium"
Robert Marino: The Case of Taino Towers

10

Week Seven

13

15

17

Week Eight

20 Mid Term Reviews

22 Mid Term Reviews

24

Week Nine

27

29

31

November

Week Ten

3 **Election Day Holiday: No Studio**

5

7

Week Eleven

10

12 $\frac{3}{4}$ Review

14 $\frac{3}{4}$ Review

Week Twelve

17

19

21

Week Thirteen

24

26

28 **Thanksgiving Holiday: No Studio**

December

Week One

1

2 Final Review

3 Final Review