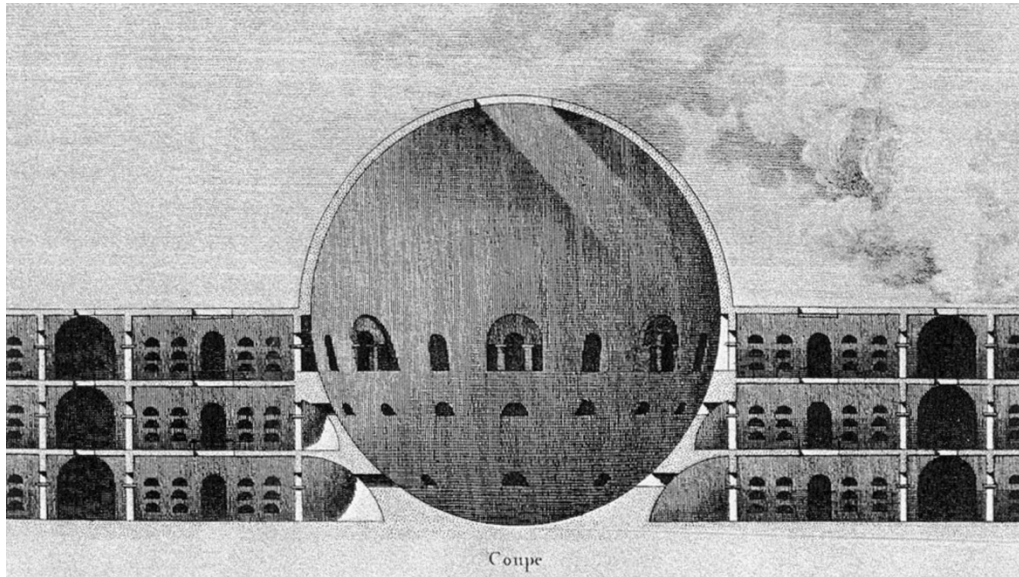


## Les Tubes

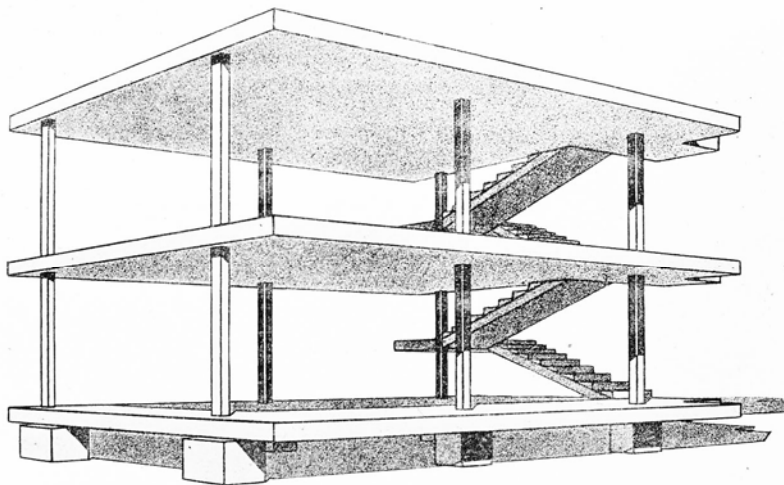
Gordon Kipping

'Pour Ledoux, c'était facile - pas de tubes,' Le Corbusier



Cemetery for Chaux, Claude-Nicolas Ledoux

Fifty years prior to stating this frustration with mechanical and electrical systems, Le Corbusier proposed Les Maisons Dom-ino. The flat slab composition with set back columns formed the basis of a repeatable housing module. When deployed in multiple, the site plan resembled a giant game of dominos.



Les Maisons Dom-ino, Le Corbusier

The module later appears throughout the work of Le Corbusier and is highly influential in the emerging modernist vocabulary for years to follow. What the module didn't account for is the emergence of building systems - heating, ventilation, air conditioning, plumbing, electrical wiring, surveillance devices...



Ceiling, Elements of Architecture, Rem Koolhaas

From spaces without these services as in the time of Ledoux, to the dangling wire aesthetic of the early modernist period, services and the space they occupied continued to thicken. The dropped ceiling became the surface which separated occupiable space from service space which could amount to 50% of the building section. While attempts to extricate the interior of buildings from services have been made, 'pas de tubes' has not fully materialized.



Exterior & Interior, Centre Georges Pompidou, Richard Rogers & Renzo Piano

Already in process, the ceiling is in retreat. Innovations in glazing technology through better sealed frames, highly effective coatings and integrated shading devices are reducing air conditioning requirements and hence ductwork space requirements.



Novartis Office Building, SANAA

Going further, new attitudes toward sustainability are creating renewed interest in measures such as natural ventilation in lieu of air conditioning. Double façades, once thought to represent the future of climate control in buildings, are giving way to occupiable buffer spaces. These spaces which form the building enclosure can hold micro climates capable of hosting program and greenery.



Exterior & Buffer, Lacation and Vassal, Fair & Exhibition Hall



At the same time, façades are working harder. In addition to traditional functions of visual connection to the outside and solar & thermal regulation, the incorporation of photovoltaics, wind and other power generation apparatus are becoming more common.



BDF Suez Office, Atelier Phileas

The rapid development of light emitting diode technology has made it possible for buildings to double as electronic information displays. When coupled with glazed façades, the building communicates to both the interior and exterior environments.



Harlem Visitors Center, Gordon Kipping, G TECTS

The studio will tackle the tubes. Pushing to the extreme this tendency towards reduction in the ceiling service space, the studio proposes the relegation of the tubes to the exterior wall and in so doing, freeing the interior to closer approximate the vision and diagram by Le Corbusier.

For Part I of the studio, initial research will be conducted in teams to include: solar & thermal regulation; ventilation, heating and cooling; solar & wind power generation; and electronic information display. The research component of the studio will be our starting point and will continue for the duration of the semester. Research will be shared to enable each student to use the pool of resources in the development of individual projects.

For Part II of the studio, each student will develop a unique service wall which will do it all - the traditional functions of visual connection to the outside and solar & thermal regulation and the additional functions of ventilation, power generation and electronic information display! As this is not an engineering studio, the development of the service wall will be diagrammed to describe functionality and physical configuration primarily.

For Part III of the studio, each student will develop a building. Eliminating the dependence on the tubes on the interior will have profound effects on the form and siting of the building. Unbound building depths, indifferent orientation and standardized ceiling heights are the hallmarks of an interior stuffed with tubes. Without this dependence, constraints on building depth, orientation and ceiling height come into play. To test this, each student will design a building which incorporates their service wall on an actual site with a simple program. The building diagram will be developed in strict dialogue with the constraints imposed by the service wall.

The program for the building will be a speculative commercial condominium. The vertical structure clad in the newly developed service wall will have clean and open interiors. Solar & thermal regulation, ventilation, power generation and electronic information display will be confined to the service wall. The building will strive to be a net zero consumer of energy. The open interiors will have the ability to accommodate office, retail, gallery, showroom or other functions, as the potential condominium buyer sees fit. The building diagram will be guided by interior comfort and energy use as mediated by the service walls to produce the unexpected in form.



Jenny Holzer Projection on London City Hall, Foster + Partners



The building site will be Baruch Houses on the Lower East Side of Manhattan. This 28 acre public housing development has 2,200 units housing over 5,000 people in almost three million square feet of building area. The studio will address the lack of programmatic diversity in the development. The injection of commercial programs will mirror the programmatic mix found elsewhere in the Lower East Side with the aim of reintegrating the development with it's surrounding district. Students will select a unique site on the development and construct a model of their building for insertion into a group model, among other representations of their work.



Baruch Houses, Emery Roth & Sons

Gordon Kipping is a native of Toronto, Canada who has been living and working in New York City since 1995. He is a licensed professional engineer and architect and has worked for the offices of Philip Johnson, Greg Lynn, Pei Cobb Freed & Partners and Davis Brody Bond. Gordon Kipping has been a Visiting Adjunct Assistant Professor at the Graduate School of Design at Harvard University and has assisted Frank Gehry in teaching design studios at the School of Architecture at Yale University. He has had appointments as an Adjunct Assistant Professor at the School of Architecture at Columbia University numerous times since 2000. Since 1999, Kipping has been principal of G TECTS ([www.gtects.com](http://www.gtects.com)) focusing on research and projects for a number of institutions, corporations, government agencies and private individuals.



Home Broadcast Window, Gordon Kipping, G TECTS

## Schedule

Week 1	September	9 11	Part I	Lottery Presentations Full Studio Meeting
Week 2		14 17		Individual Portfolio Review & Discussions Research Group Meetings
Week 3		21 24		Guest Presentation & Discussion Research Group Meetings
Week 4	October	28 1	Part II	Research Group Presentations Individual Discussions
Week 5		5 8		Site Visit & Site Model Planning Individual Discussions
Week 6		12 15		Guest Presentation & Discussion Individual Discussions
Week 7		19 22		Individual Discussions Midterm Review Presentations
Week 8		26 29	Part III	Full Studio Meeting Individual Discussions
Week 9	November	2 5		Election Day - No Studio Guest Presentation & Discussion
Week 10		9 12		Individual Discussions Individual Discussions
Week 11		16 19		Individual Discussions Individual Presentations
Week 12		23 26		Guest Presentation & Discussion Thanksgiving - No Studio
Week 13	December	30 3		Individual Discussions Individual Discussions
Week 14		7 10		Individual Discussions Final Review Presentations

Gordon Kipping will be in attendance for all studio sessions and reviews for the duration of the semester. Visitors from the GSAPP faculty and from the outside with expertise in the various areas we pursue will offer seminars and critique throughout the semester. All individual and group work will be posted to a common blog which will serve as the interface through which ideas and information are shared and presented.

The required reading list will include articles and books by Le Corbusier, Reyner Banham, Peter Eisenman, Rem Koolhaas and others.